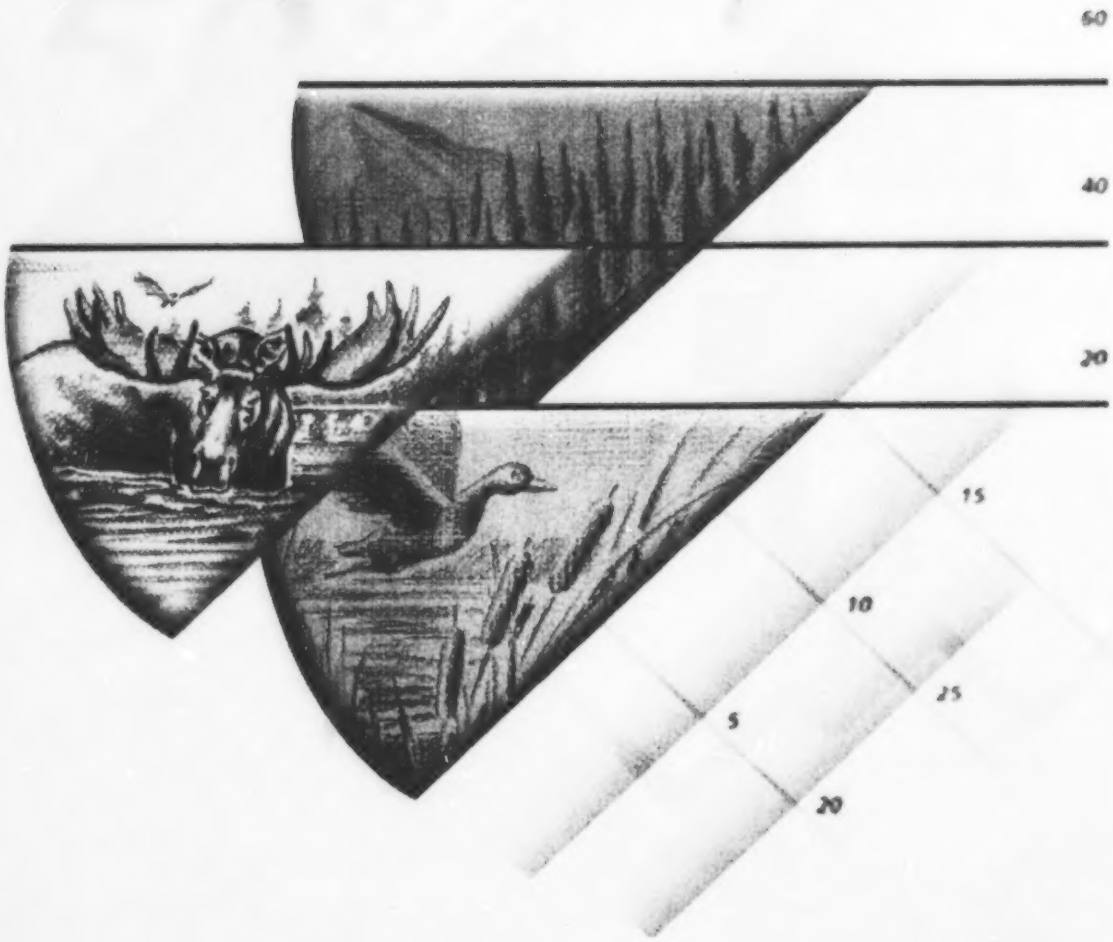
Municipal Water Pricing
1991-1999



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MUNICIPAL WATER PRICING
1991 - 1999

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Executive Summary

This report is the latest in a series by Environment Canada which outlines the results of a 1999 survey of water use, treatment and pricing in Canadian municipalities. Data from the 1991, 1994 and 1996 surveys are incorporated to illustrate trends in various aspects of water pricing, metering and use over the past decade.

These results reinforce the notion that Canadians are major users of water. Residential consumers use roughly twice as much per person as in other industrialized countries, with the exception of the United States. Canadian households used 327 litres per person per day in 1996, compared to 128, 130 and 149 litres per person per day in Germany, the Netherlands and the United Kingdom, respectively (OECD, 1999).

The latest survey reveals a 5% increase in consumption per person following three consecutive surveys during which per capita residential water use in Canada had declined. By 1999 Canadian use had risen to 343 litres per person per day. This translates into enough water to fill 91,000 rail tank cars every day or 7,900 million litres per day.

One of the key factors explaining high rates of consumption relates to the absence of appropriate price signals. In 1999, a full 44% of Canadian residences served by municipal water systems were not metered. Also, 55% of Canadians faced residential water use charges that discouraged water conservation. The impact of these water pricing structures is highlighted by the fact that water use was 70% higher when consumers face flat monthly rates rather than volume-based rates.

The lack of full-cost pricing and conservation-oriented pricing structures has also contributed significantly to an imbalance between the demand and supply for water infrastructure. According to the National Round Table on the Environment and Economy, unmet water and wastewater infrastructure needs in Canada were $38-49 billion in 1996, and capital costs for the following 20 years would be in the order of $70-90 billion. At the same time, only 50% of the cost of maintaining and operating water infrastructure was actually being met through cost recovery from users of the systems.

In summary, the combination of low levels of residential water metering, conservation-discouraging pricing structures and lack of real price increases in key rates has led to substantially increased residential water use levels in 1999 and will continue to erode municipalities' ability to finance needed infrastructure.

This report is available in color at http://www.ec.gc.ca/erad/

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1.0 Introduction

1.1 Background

This report is based on data from Environment Canada's Municipal Water Use and Pricing Surveys of 1991, 1994, 1996 and 1999 (the last year for which the survey has been carried out). The Municipal Water Use and Pricing Survey has been done every 2-3 years since 1981. A questionnaire is sent out to municipalities with populations greater than 1000 asking questions related to water and wastewater use, treatment and pricing. In 1999, eighty-seven percent of the municipalities sent the questionnaire responded.

The aim in writing this report is to allow readers with non-technical backgrounds to understand the survey results. Detailed tables and technical notes are provided in attached annexes to enable municipal officials, rate makers, policy makers and others requiring detailed data with much of the information needed to assess pricing arrangements and their relation to water use levels.

The design and levels of the rates have a direct impact on the use of water, the capital and operating costs for water infrastructure, and the amount of revenue raised. Canadian water and sewer rates vary widely, primarily because different sets of circumstances affect each municipality in the setting of pricing practices and criteria. In some cases, municipalities may be subject to general pricing guidelines imposed by other municipalities that provide water (or sewage treatment), by regional water management agencies, or by their respective provincial governments. Many municipalities follow the guidelines set out in the Water Rate Manual published by the American Water Works Association, and some are beginning to use a rate manual published by the Canadian Water and Wastewater Association.

The one constant regarding water prices is that they have not been sufficient to cover the costs of providing municipal water and wastewater services. The National Round Table on the Environment and Economy reported that unmet water and wastewater infrastructure needs ranged from $38 – 49 billion and that only roughly one-half of all infrastructure O&M and capital costs are met through subsidization (NRTEE, 1996).

1.2 Water Pricing Rates and Economic Incentives

The prices of most goods and services are major determinants of usage, even in the case of basic services such as water supply and wastewater treatment (the higher the price, the lower the consumption). Evidence of this relationship between price and water demand has been well-documented (OECD, 1999).

A water utility's rate schedule governs the price charged to individual customers. The price level chosen and the price structure determine the overall level of water consumption. The wide variety of rate schedules in use throughout Canada can be categorized into two basic types — flat and volume-

based. The distinction between the two rate types is important in determining the degree of incentive or disincentive influencing the water (and sewage service) demands of customers.

1.3 Flat Rates

Flat rates are the simplest type of rate schedule from both a customer and administrative viewpoint. Flat rates are fixed payments in each billing period, unrelated to the volume of water used. Flat rates can also take the form of additions to the property tax bill, frontage charges, or other special assessments for water servicing, all of which are unrelated to water usage. Municipalities determine flat rate charges in a variety of ways, taking into account the cost of providing service and, in some cases, expected consumption. In return for this payment, customers obtain unlimited access to water services.

The principal disadvantage of flat rate pricing, from an environmental perspective, is that it results in higher water use than volume-based pricing, because once the monthly payment is made, customers may take as much water as they choose at no additional cost. This leads to wasteful water use practices such as lawn watering during rainstorms, failure to replace dripping faucets, or using treated, potable water to clean a driveway. Under this pricing structure, customers have neither the incentive nor the information required for developing awareness of water usage. Also, the municipality has little control over water demands, except through administrative measures such as lawn watering restrictions.

1.4 Volume-Based Rates

Volume-based rates relate the amount paid for water services to the amount of water used by consumers. This can be done in several ways, the simplest being a constant charge per unit (e.g., unit =cubic metre) of water used. This type of pricing schedule is referred to here as a "constant unit charge" (CUC). CUCs may also include a fixed charge component that is unrelated to the actual volume of water used. Volume-based pricing requires that meters be installed to measure a customer's water consumption.

Some municipalities price water according to declining block rates (DBR). Under this type of schedule, water use in each billing period is divided into successive volumes or blocks, with each successive block charged at a lower price per unit than in the previous block (the more you use, the less you pay). Typically, one or two initial blocks cover residential and light commercial water use, with subsequent blocks containing heavy commercial and industrial uses. The low costs per unit associated with successively higher blocks mean that declining block rates reduce the incentive for water conservation. However, these rates may be justified by economies of scale present when servicing large volume customers.

Other municipalities employ conservation-oriented increasing block rate (IBR) schedules, in which the unit price of water increases progressively through the blocks of the rate schedule (the more you use, the more you pay per unit). In these cases, consumers have increasing incentives to conserve

water to avoid the higher rates in the upper blocks. Users of large amounts of water, or users with high peak flows, can have the largest impact upon water system planning and sizing, since systems must be built to meet the largest demands. When employed for these types of users, increasing block rates can lower water demands and system costs significantly.

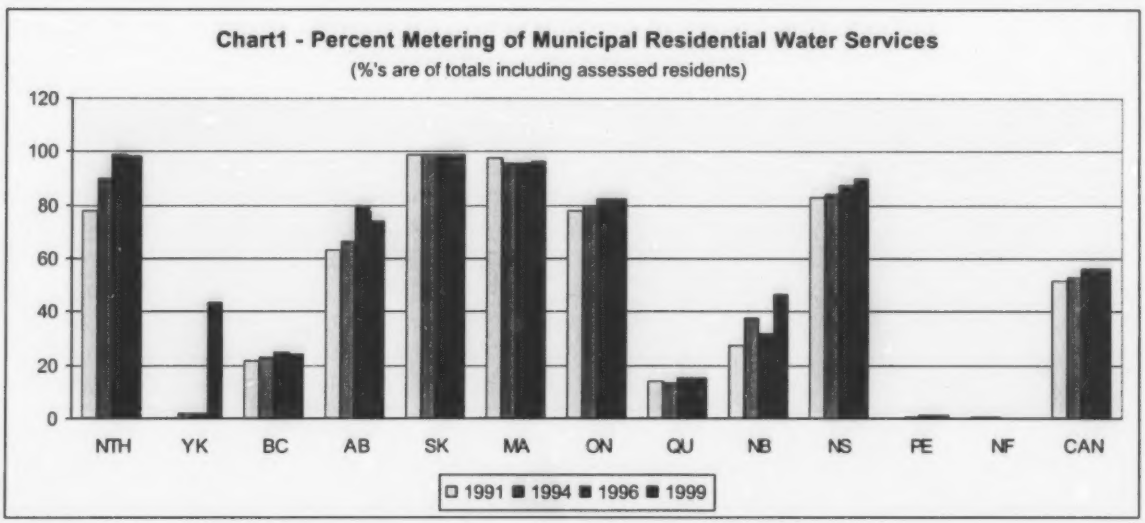
Finally, there are municipalities with complex pricing systems. For example, they may combine two different declining block rates (or as in one case in the survey, a decreasing and increasing block rate) into the same schedule. Prices thus appear to fall until a certain level of usage is reached, then rise, and later fall again. This is usually the result of an attempt to combine components of residential and commercial pricing systems into one schedule. Complex rates may also occur if sewer charges are calculated on the basis of block limits that differ from those used for the water schedule.

The most common situation is for municipalities to have parallel block rate schedules for residential, commercial, or industrial users. In addition, rates for the highest volume users in many communities are often the result of direct individual negotiations by companies and the respective municipalities.

2.0 Residential Water Pricing Structures, Levels and Use

2.1 Residential Water Metering

The percentage of residences with water services from responding municipalities that were metered was unchanged between 1999 and 1996 at 56%. This represented a small increase from 53% of households in 1994 and 52% in 1991 (see Table 1). An estimated 3.48 million water meters would need to be installed in 1999 in order to achieve complete volume-based water pricing. Chart 1 below indicates the levels of metering of households across the country for all of the survey years.



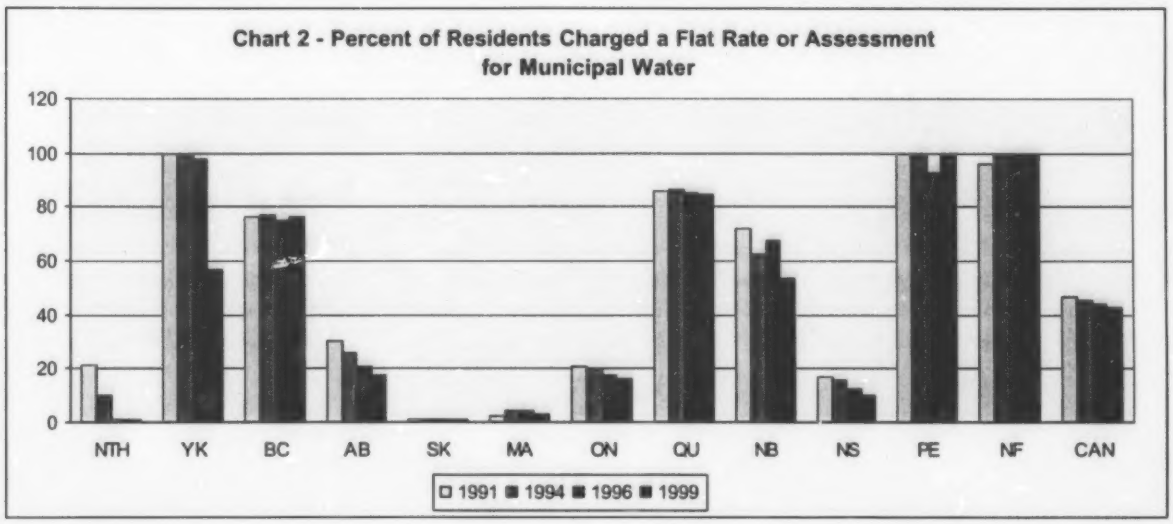
2.2 Residential Pricing Structures and Levels

2.2.1 Flat Rates and Price Levels

In 1999, 43% of the total households with municipal water service paid flat rates. This was down slightly from 44% in 1996, 46% in 1994, and 47% in 1991 (see Table 2 and Table 19). In the four survey years, flat rates for residences were most common in Newfoundland, Prince Edward Island, New Brunswick, Quebec, British Columbia and the Yukon (see Chart 2).

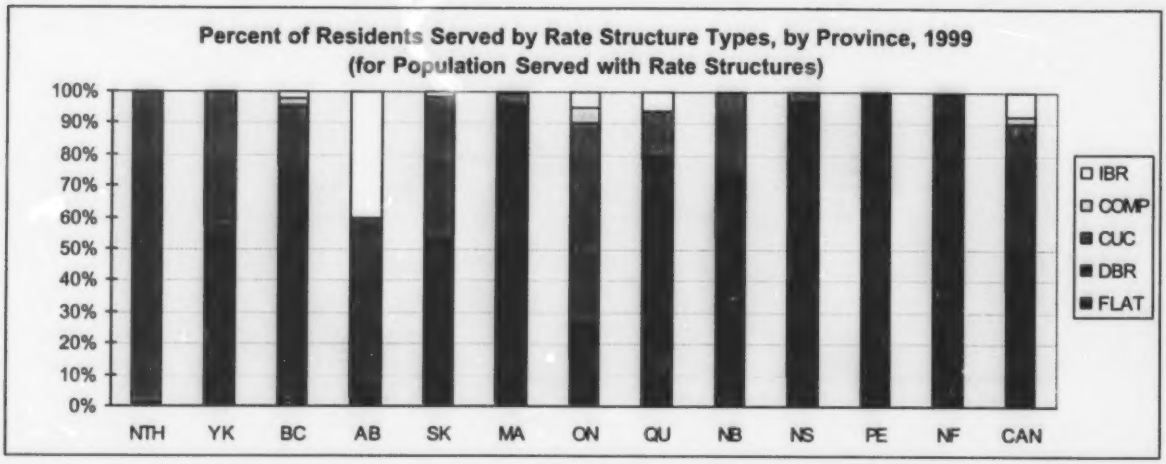
There are instances where a volume-based rate structure can have the same characteristics as a flat rate. This occurs if the volume-based structure contains a minimum charge that includes a volume of water greater than the normal range of residential use. This was the case for 3.4 million residents who paid volume-based rates in 1999 (Table 3). Thus some municipalities with volume-based rate structures may, in fact, be charging what amounts to a flat rate. When this group is taken into account, almost 50% of households pay flat rates.

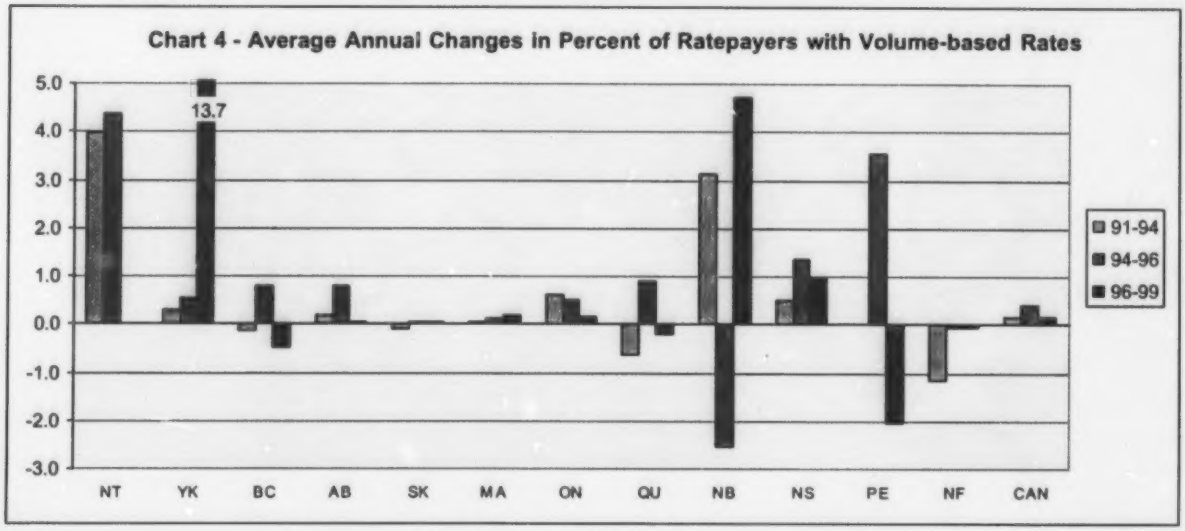
In 1999, the vast majority of residents (6.4 million) who paid flat rates paid a minimum of $14.50 per month (Table 4). The average price paid in 1999 was $22.40, up from $20.76 in 1996 and $16.87 in 1991 (inflation adjusted).



2.2.2 Volume-Based Rates and Price Levels

The constant unit charge (CUC) was the volume-based charge most frequently in use across Canada. In 1999, 39% of ratepayers faced this rate structure, up from 38%, 37% and 33% in the earlier survey years. Declining block rates (DBR) were the next most frequently used volume-based rates (see Charts 3 & 4). Declining block rates were charged 13% of the time in 1999, down from 14%, 19% and 24% in the preceding survey years. Increasing block rates (IBR) or complex rates were charged to 9.9% of residential population in 1999, down from 10.4% in 1996, but up from 6% in 1994 and 4% in 1991.





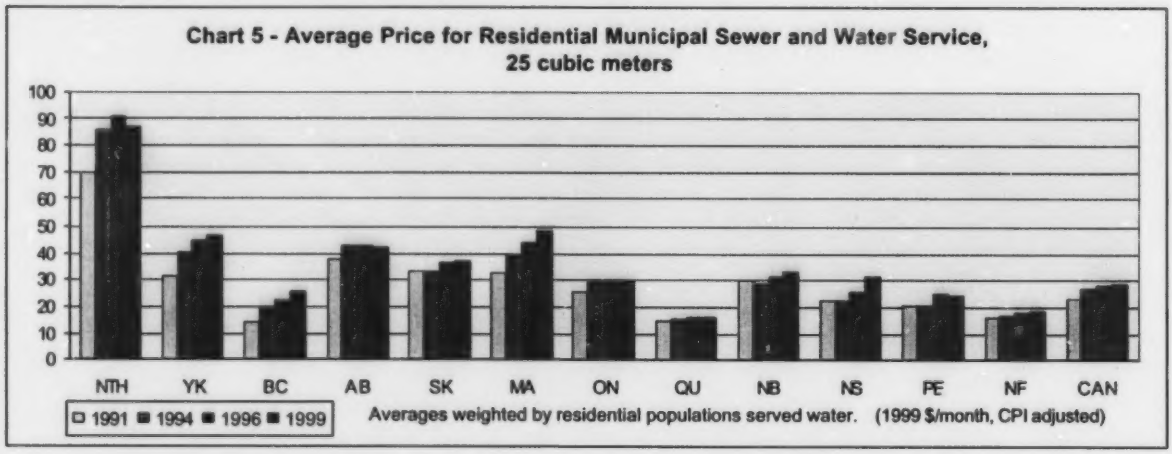
The average level of constant unit charges for water nationally stayed constant from 1994 to 1999 at \$0.96/m^3, but had been \$0.85/m^3 in 1991 (inflation adjusted). For all block rate structures, the average first block cost consumers \$1.12 in 1999, \$1.08 in 1996, \$1.04 in 1994 and \$0.91 in 1991 (all in \$1999).

2.2.3 Overall Price Levels

To demonstrate the impact of water prices on residential users, the water rate information from the surveys was used to calculate total monthly bills for 10, 25 and 35 m^3 of water per month for a household. This permits an examination of trends over time and comparisons amongst the provinces of water prices at various levels of use. These prices include any relevant minimum and/or sewer charges.

Water prices for residential customers vary widely across the country, reflecting differing pricing systems and additional charges, such as sewer charges. In 1999, the national monthly residential water price at the 25 m^3 level was $28.56 ($34.95 at 35 m^3), reaching lows in Quebec and the coastal areas, and highs in the prairie provinces and the territories (Table 8).

Chart 5 shows average prices at the 25 m^3 level of water use for Canada, by province. The differences in prices between provinces may reflect differences in the cost of providing municipal water services and may also reflect subsidy levels. Newfoundland and British Columbia, the provinces with the lowest average rates possess advantages that include abundant supplies, availability of gravity-fed systems, and generally good water quality. On the other hand, parts of the prairie provinces experience frequent water shortages and water quality problems in some areas. In the territories, climatic conditions (especially permafrost) contribute to high supply costs.



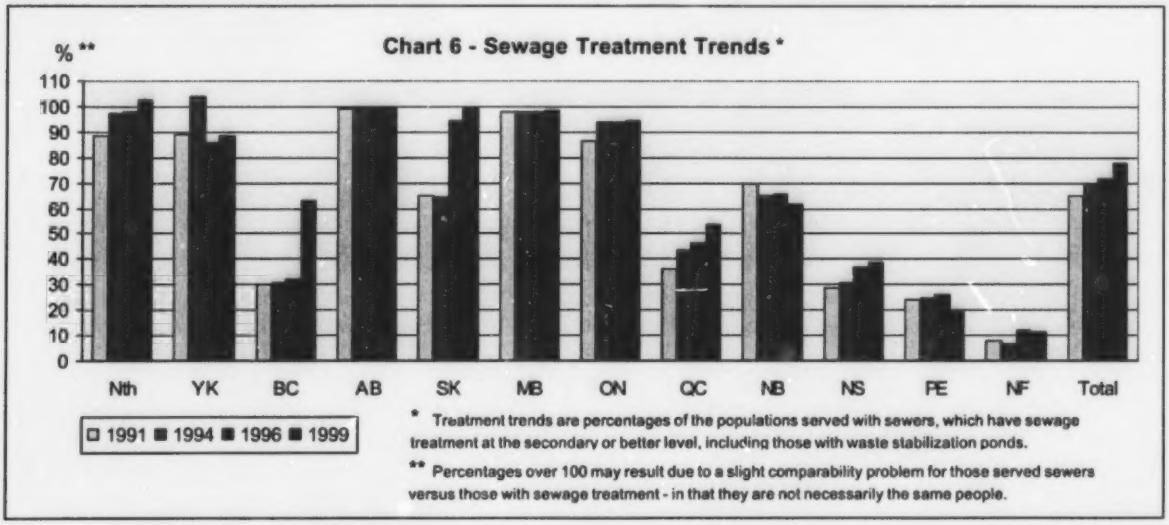
At the 35 m^3 per month level, the price was $34.95 in 1999, an increase from $34.02 (inflation adjusted) in 1996, $32.49 in 1994 and $28.33 in 1991, with the largest overall changes occurring in British Columbia, Yukon, Manitoba, and the Northern Territories. Prices in Quebec, Newfoundland and British Columbia were lower than those of most other provinces. However, these changes have been neither regular nor consistent within provinces. Between 1996 and 1991 the greatest price increases had been in Alberta, Saskatchewan, Ontario, Nova Scotia and Prince Edward Island (Tate & Lacelle, 1995). Even given this increase in water prices, the overall observation from Tables 8 and 9 is that water rates across much of Canada remain low.

It is also important to note that the marginal price (price paid for the last cubic metre used) of water is an important indicator of the conditions underlying demand. Marginal prices in 1999 at the 35 m^3 level , on a national average, were $1.03/$m^3$, up only slightly from $1.01/$m^3$ in 1996 and $0.99/$m^3$ in 1994. In 1991 the marginal price was $0.87/$m^3$ (inflation adjusted).

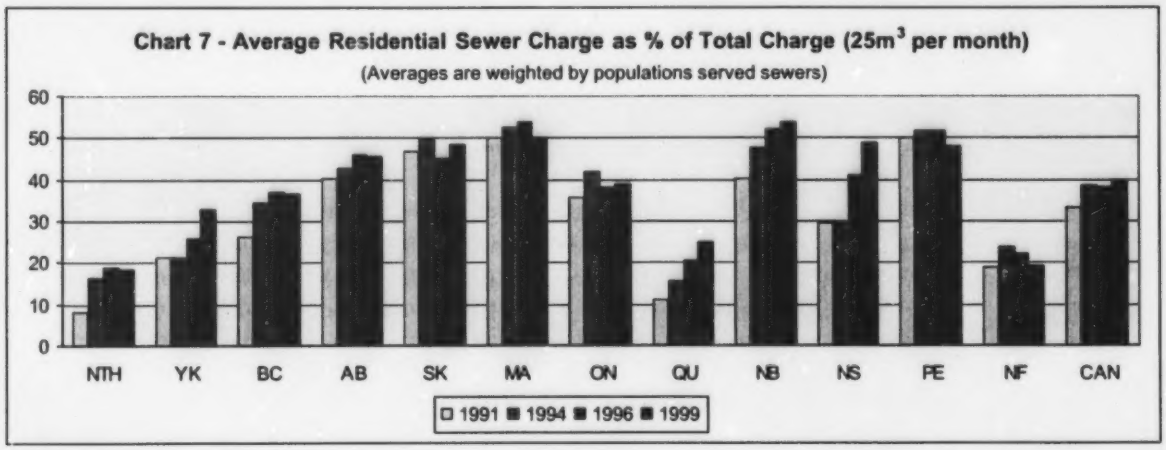
2.3 Sewer Charges

In 1999, 22% of those receiving sewer services from municipalities did not receive secondary level sewage treatment from the municipal system. In 1996, 28% did not have secondary level sewage treatment, in 1994 it was 31%, and in 1991 it was 35%. Therefore, some improvement was evident between 1991 and 1999 (13% fewer lacking in secondary level sewage treatment).

Charges related to sewage collection and treatment, referred to in this report as "sewer charges", are frequently integrated with water charges in calculating customer billing. The flat sewer charge is the most frequently used. The second type of sewer charge comprises a fixed percentage of the customer's bill for water supply; thus, if the water pricing system is volume-based, then the sewage charges will also be volume-based. In most of these cases, the sewer charge is often over 40% of the water bill and sometimes in excess of 100% (Table 11). A trend is emerging toward increased use of sewer charges, as they are a visible and easily understandable environmental charge. Other types of sewer charges are based upon the chemical composition of the sewage, municipal property assessment, and various combinations of the types outlined above. As noted, the total water prices in this report include relevant sewer charges.

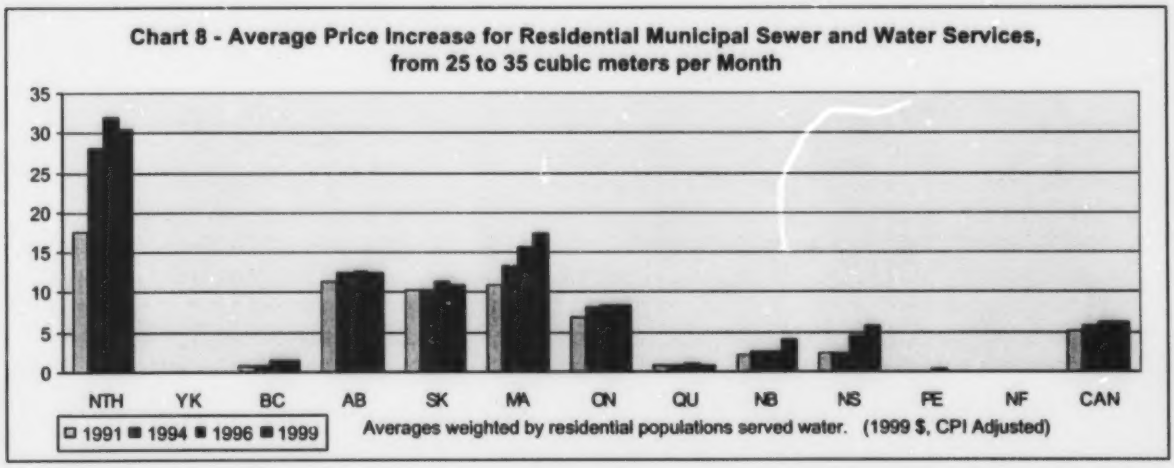


Overall, sewer charges accounted for about 39.4% of the average residential monthly water bill by 1999. In 1996 this was 38.3%; in 1994 it was 38.6% and in 1991 only 33.3%. The levels of sewer charges were highest in the Maritimes and the Prairies; all of these provinces average around 50% of the total water charge. Although still lower than the Canadian average, Quebec's average percentage increased between 1996 and 1999, from 20.5% to 25.1% of the total water charge.



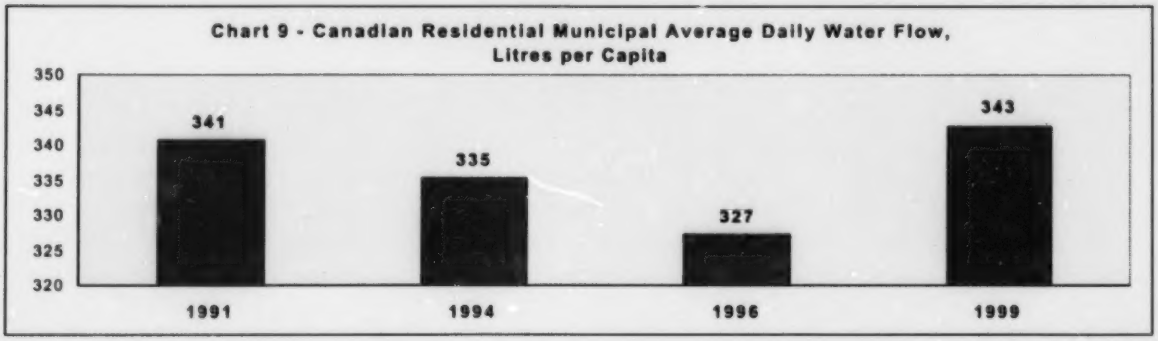
The data in Table 8 contain sewer charges. To examine the effect of these sewer charges on the overall water bill, the 25 m^3 per month portion of the table was calculated without the sewer charges, as this is closest to the estimated residential water use per month (29 m^3/mth) (Table 12). At the national level in 1999, the average monthly price to residential customers was $17.32 without the sewer charges, as opposed to $28.56 with the charge included.

Sewer and water price changes over the four surveys for each province and Canada are shown in Chart 8 - Average Price Increases for Residential Municipal Sewer and Water Services (25 to 35 m^3/mth). There were gradual price increases from 1991 to 1996, but very little change in price between 1996 and 1999 for Canada as a whole. Manitoba, New Brunswick and Nova Scotia had substantial price increases from 1996 to 1999.

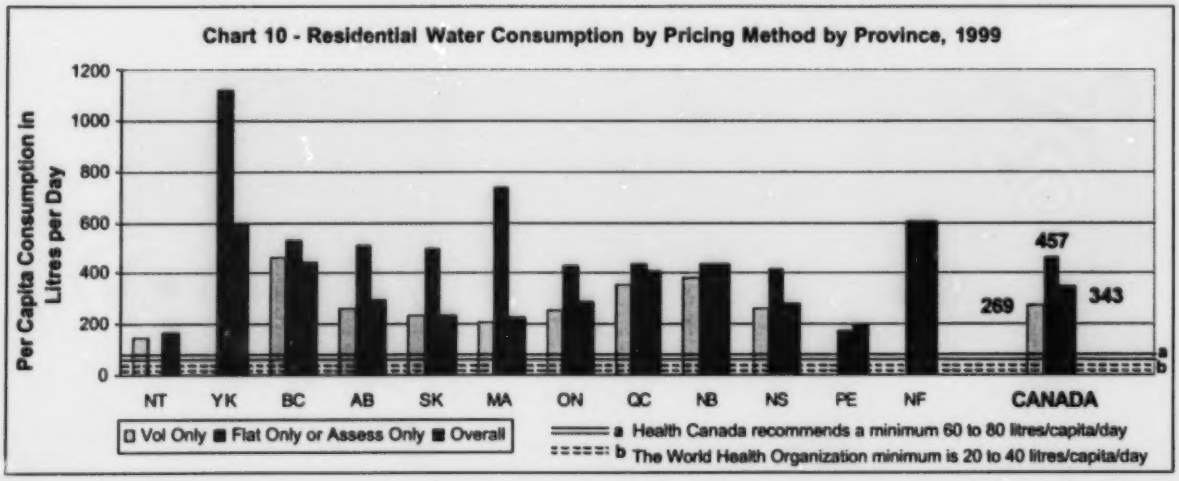


2.4 Water Use Trends

In 1999, residential water consumption per person increased to 343 litres per day. Although the trend had been for water use to decrease over the survey years from 1991 to 1996 (see Chart 9 below).



All surveys showed considerably higher levels of consumption when people were charged flat rates as opposed to volume-based rates, both on a national and provincial basis. Chart 10 shows that in 1999 Canadians charged prices based on the volume of water used had a consumption level of 269 litres per person per day. Those paying flat rates used 457 litres per person per day, or 70% more water.



3.0 Commercial Water Pricing Structures, Levels and Use

3.1 Commercial Water Prices

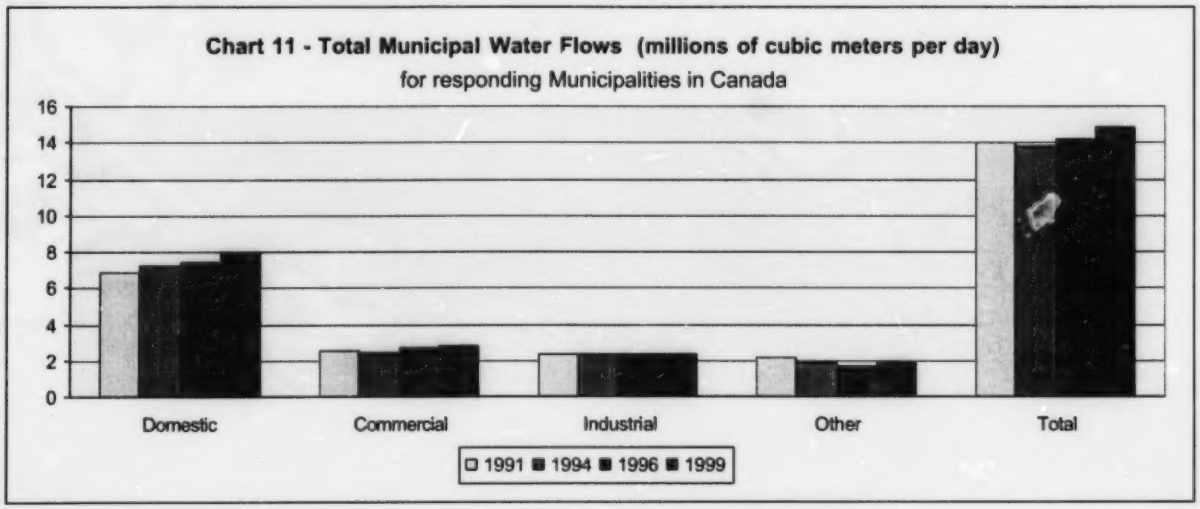
Commercial water prices (Table 15) exhibited many of the same patterns as residential prices, except commercial rates tended to be somewhat higher. Between 1991 and 1999, inflation adjusted commercial rates increased less than residential – about 15% versus 23% for residential, at the $35m^3$ per month use level. A comparison of national residential and commercial means at the 35 m^3 per month level shows commercial rates were 14.0% higher in 1991, but only 4.8% higher in 1999, with a steady decline in between.

In 1999, provincial prices for commercial consumers for 35 m^3 of monthly water service varied from $21.62 in Quebec to $58.25 in Alberta (even higher rates in the northern territories can be attributed to small population and unique environmental conditions), with a national price of $36.62. These prices are higher than those of 1991 (inflation adjusted), which varied from $19.78 in Quebec to $52.68 in Alberta, with a national price of $32.29.

3.2 Commercial Water Use

Commercial water use increased from 2.74 to 2.84 million m^3 per day between 1996 and 1999.The largest increase in use was between 1996 and 1994, as in 1994 water use was 2.42 million m^3 per day. In 1991 commercial water use was 2.55 million m^3 per day.

Water use in this sector had only increased slightly between 1996 and 1999, compared to residential water use which had increased quite substantially.



ANNEX 1

Survey Methodology and Data Analysis

Methodology

The survey is sent to all Canadian municipalities with populations in excess of 1000 persons. The survey requests copies of municipal water and sewage rate schedules, as well as related information on water use. The survey questionnaires are completed by water servicing and administrative personnel in the respective municipalities, and the accuracy of the data reflect the knowledge of these persons. In cases where discrepancies appeared, either within the questionnaire responses themselves (e.g., contradictory data) or between years (e.g., an abnormal and unexplained change in prices), respondents were contacted to clarify their responses.

The data are presented on a provincial and population size group basis, and where possible, averages and other results are weighted by the populations served in each municipality. These compilations permit basic observations as to the spatial variability of prices across Canada. Trends can also be determined from the four survey years presented.

The survey information is adjusted so that: 1) different metering, rate and rate structures and water use levels reported by municipalities could be fairly compared, 2) actual prices paid by consumers could be compared and, 3) trends could be determined.

Most findings are population weighted, meaning that instead of taking averages of values (for example, prices) for large and small populations, the size of values depends on the size of the population represented. This is done so that very large or very small values for a very small population do not overshadow more normal values that represent the experience of a greater number of people. The exception are commercial rates, which are not weighted by population, as neither the population served commercially nor commercial metering levels are known. Therefore commercial rates are presented as averages by rate schedule.

The pricing analysis converts the diverse range of rate types into prices that are comparable across municipalities. All prices presented here are monthly ones (even if billed quarterly, bi-annually etc.), and the price calculations include all normal minimum charges (e.g., meter or service charges) by the respective municipalities. Unless otherwise indicated, prices have been adjusted for inflation and are shown in 1999 dollars. Most Canadian municipalities recover some or all of the costs for sewage collection and treatment through extra charges, or "surcharges" on water bills, primarily because return flows are not metered. Where such surcharges form part of water rates, they are included in the price calculations contained here. Residential and commercial prices are considered separately in the report.

The basic retail price analysis includes three standard volumes of residential and commercial monthly water use. To facilitate inter-year comparisons, these correspond to the volumes used in the earlier analysis of municipal water prices in 1986 and 1989. For residential use, these volumes are 10, 25, and 35 m^3 per month; they represent a generous "lifeline" amount of usage, average family usage and high family usage respectively. For commercial use, volumes are 10, 35, and 100 m^3 per month. The latter volume represents intensive uses such as light manufacturing or larger stores and offices.

Survey returns are compiled into a database describing the types of rates in use, the characteristics of the rates (e.g., number and size of blocks, unit prices within respective blocks), information on sewer surcharges, domestic metering, and total, average and marginal water prices for selected monthly volumes of use (by both residential and commercial water users).

Limitations of the Data and Analysis

This report has a number of analytical limitations:

?? The survey has not collected data on system costs, such as capital or operating and maintenance costs. Thus, the extent to which these costs influence the setting of water rates has not been examined on a municipality-by-municipality basis.

?? Some municipalities fund a portion of their water-related expenditures from general revenue; this portion may vary from year to year. No data on this issue was collected in the surveys.

?? The analysis deals only with domestic and commercial water rates and prices. Although estimated industrial water flows are included, industrial, irrigation, and wholesale rates (i.e. the rates paid by municipal utilities to other municipalities, or regional, or provincial water suppliers) are not included.

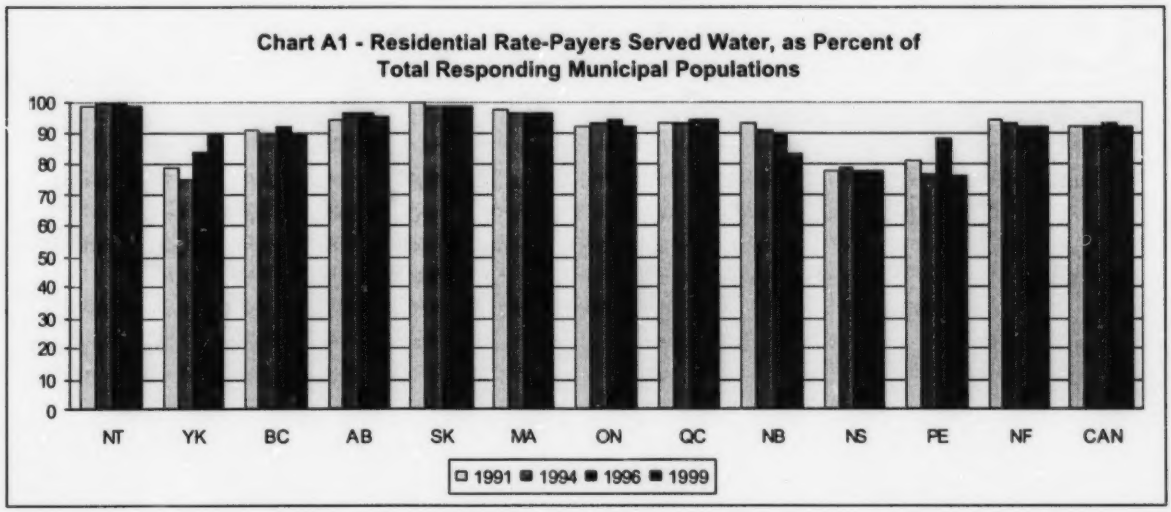
?? Not all metered customers are charged according to their actual water use. Some municipalities estimate water bills and flows by metering a small sample of their consumers, even though they pay flat rates. However, the overall population with volume-based pricing varied from the population that was metered by no more than one or two percentage points. Therefore, volume-based and metered populations may be used interchangeably in most situations.

Survey Response Rates

The response rate for the 1999 survey is 87% – relatively high for mailed surveys. The response rates for the 1996, 1994 and 1991 surveys are comparable, resulting in reliable estimates from analysis of these survey results. The small minority of non-respondents to specific questions are not counted in the tabulation of results for those questions.

Many municipalities employ parallel residential and commercial schedules, and many also maintain both metered and unmetered schedules. For these reasons, there are more than twice as many rates as there are municipalities. The residential rates are analyzed separately from the commercial rates for reasons mentioned previously. There are a total of 2685 commercial and residential rate schedules for the responding municipalities in 1991, plus 77 assessment schedules. In 1994 this increased to 2886 rate schedules, plus 76 assessments. In 1996 this dropped slightly to 2826 rates, plus 65 assessments, and by 1999 it was 2811 rates plus only 54 assessments. The commercial rates make up roughly half of the schedules in any given year – just under half for the first three surveys, and just over half for the 1999 survey. Flat rates comprise the majority of all commercial rate schedules in all surveys, but flat rates are much less dominant than in residential rates.

In 1999, the total *residential* population of all municipalities responding with pricing information – including rate structures or assessments as well as residential metering percentages – was 25.0 million, with 23.1 million served water (see Tables 18 and 19). This is out of a total Statistics Canada-estimated Canadian population of 30.5 million (average of first and fourth quarters) (CANSIM, Statistics Canada, 2000). In 1996, the total responding municipal population was 24.3 million, with 22.8 million served water, out of a total population of 29.6 million. In 1994, the total responding municipal population was 23.3 million, with 21.7 million served water, out of a total population of 29.0 million. In 1991, the total responding municipal population was 22.2 million, 20.7 million of who were served water, out of a total population of 28.0 million. The percentage of municipal populations across the country with water services is indicated in Chart A1 below.



ANNEX 2

Detailed Tables

Table 1 - 1991
Residential Water Metering, by Province and by Population Size Group

Province	assessed population served	metered assessed pop. served	population served water with rate	pop served metered water with rate	percent of population metered	percent of population not metered
Newfoundland	2,500		349,820	1,405	0.40	99.60
P.E.I.	0		36,849	0	0.00	100.00
Nova Scotia	0		436,713	361,895	82.87	17.13
New Brunswick	0		324,759	90,074	27.74	72.26
Quebec	1,852,408		3,615,657	768,031	14.05	85.95
Ontario	248,098		7,918,314	6,336,513	77.59	22.41
Manitoba	2,075		755,051	737,202	97.37	2.63
Saskatchewan	0		603,011	596,555	98.93	1.07
Alberta	549,055		1,479,669	1,281,922	63.19	36.81
British Columbia	500	375	2,553,573	556,735	21.81	78.19
Yukon	0		17,300	0	0.00	100.00
North Territories	0		27,300	21,338	78.16	21.84
Population Size Group (000's)						
below 2	2,134		365,778	132,681	36.06	63.94
2 to 5	41,599	375	939,058	278,252	28.40	71.60

5 to 50	277,918		5,397,075	2,289,295	40.34	59.66
50 to 500	757,930		8,325,850	5,651,872	62.22	37.78
500+	1,575,055		3,090,255	2,399,569	51.43	48.57
Total	2,654,536	375	18,118,016	10,751,670	51.76	48.24

Table derived from final MUP91 database (for responding municipalities), Environmental Economics Branch, Environment Canada.

Table 1 - 1994
Residential Water Metering, by Province and by Population Size Group

Province	assessed population served	metered assessed pop. served	popuiation served water with rate	pop served metered water with rate	percent of population metered	percent of population not metered
Newfoundland	12,000		358,552	1,234	0.33	99.67
P.E.I.			38,807	150	0.39	99.61
Nova Scotia			465,858	393,015	84.36	15.64
New Brunswick			340,612	128,612	37.76	62.24
Quebec	1,776,229	8,376	3,760,542	751,721	13.71	86.29
Ontario	257,712		8,275,590	6,784,587	79.51	20.49
Manitoba	17,106		776,741	758,983	95.61	4.39
Saskatchewan			638,449	629,724	98.63	1.37
Alberta	471,050	2,500	1,635,063	1,401,234	66.57	33.43
British Columbia	400	300	2,784,757	647,746	23.27	76.73
Yukon			19,700	339	1.72	98.28
North Territories			41,884	37,797	90.24	9.76
Population Size Group (000's)						
below 2	5,545		425,988	160,925	37.29	62.71
2 to 5	34,906	300	1,046,942	347,608	32.15	67.85
5 to 50	316,852	2,500	5,751,224	2,671,735	44.05	55.95
50 to 500	693,478	8,376	7,727,221	5,358,051	63.67	36.33
500+	1,483,716		4,185,180	2,996,822	52.86	47.14
Total	2,534,497	11,176	19,136,555	11,535,141	53.25	46.75

Table derived from final MUP94 database (for responding municipalities), Environmental Economics Branch, Environment Canada.

Table 1 - 1996
Residential Water Metering, by Province and by Population Size Group

Province	assessed population served	metered assessed pop. served	population served water with rate	pop served metered water with rate	percent of population metered	percent of population not metered
Newfoundland	12,000		362,174	884	0.24	99.76
P.E.I.			51,033	720	1.41	98.59
Nova Scotia			489,408	427,521	87.35	12.65
New Brunswick			345,221	111,200	32.21	67.79
Quebec	1,775,378	5,028	3,996,258	869,571	15.14	84.86
Ontario	161,827		8,779,509	7,388,810	82.64	17.36
Manitoba	16,981		790,660	773,871	95.82	4.18
Saskatchewan			652,951	644,639	98.73	1.27
Alberta	410,499	3,000	1,760,334	1,712,345	78.91	21.09
British Columbia			3,105,646	769,014	24.76	75.24
Yukon			24,200	495	2.05	97.95
North Territories			45,941	45,441	98.91	1.09
Population Size Group (000's)						

below 2	3,819		396,884	160,013	39.93	60.07
2 to 5	31,242		1,032,475	349,415	32.85	67.15
5 to 50	196,229	3,000	5,914,640	2,702,111	44.25	55.75
50 to 500	710,218	5,028	8,598,776	6,187,796	66.49	33.51
500+	1,435,177		4,460,560	3,345,176	56.74	43.26
Total	2,376,686	8,028	20,403,335	12,744,511	55.96	44.04

Table derived from final MUP96 database (for responding municipalities), Environmental Economics Branch, Environment Canada.

Table 1 - 1999
Residential Water Metering, by Province and by Population Size Group

Province	assessed population served	metered assessed pop. served	population served water with rate	pop served metered water with rate	percent of population metered	percent of population not metered
Newfoundland	10,000		357,661		0.00	100.00
P.E.I.			35,476	360	1.01	98.99
Nova Scotia			487,936	439,030	89.98	10.02
New Brunswick			357,774	166,036	46.41	53.59
Quebec	1,492,647		4,142,029	869,664	15.43	84.57
Ontario	147,636		9,031,953	7,541,130	82.15	17.85
Manitoba	16,064		780,602	769,235	96.56	3.44
Saskatchewan			666,685	658,258	98.74	1.26
Alberta	352,314		1,946,274	1,696,441	73.80	26.20
British Columbia			3,217,806	775,286	24.09	75.91
Yukon			24,861	10,750	43.24	56.76
North Territories			46,267	45,517	98.38	1.62
Population Size Group (000's)						
below 2	3,272		352,201	152,147	42.80	57.20
2 to 5	16,222		951,918	302,262	31.22	68.78
5 to 50	216,637		6,148,190	2,928,604	46.01	53.99
50 to 500	399,538		8,411,106	5,757,997	65.35	34.65
500+	1,382,992		5,231,909	3,830,697	57.91	42.09
Total	2,018,661	0	21,095,324	12,971,707	56.12	43.88

Table derived from final MUP99 database (for responding municipalities), Environmental Economics Branch, Environment Canada.

Table 2 - 1991
Residential Population Served Water by Rate Type, by Province and by Population Size Group

	Flat		Volume-based Rate Types								Total	Rates	Vol.
Province	Rate	%	CUC	%	DBR	%	IBR	%	Complex	%	Vol.-based	Total	%
NF	336,540	96.2	12,880	3.7	400	0.1					13,280	349,820	3.8
PE	36,849	100.0									0	36,849	0.0
NS	74,718	17.1	1,754	0.4	360,241	82.5					361,995	436,713	82.9
NB	234,135	72.1	15,920	4.9	68,958	21.2	5,746	1.8			90,624	324,759	27.9
QU	2,831,737	78.3	753,733	20.8	12,500	0.3	17,687	0.5			783,920	3,615,657	21.7
ON	1,469,736	18.6	4,172,075	52.7	1,842,922	23.3	350,581	4.4	83,000	1.0	6,448,577	7,918,314	81.4
MA	17,849	2.4	20,985	2.8	716,217	94.9					737,202	755,051	97.6
SK	6,456	1.1	267,042	44.3	298,034	49.4	30,250	5.0	1,229	0.2	596,555	603,011	98.9
AB	72,068	4.9	509,287	34.4	833,745	56.3	64,569	4.4			1,407,601	1,479,669	95.1
BC	1,952,083	76.4	277,460	10.9	206,829	8.1	77,201	3.0	40,000	1.6	601,490	2,553,573	23.6
YK	17,300	100.0									0	17,300	0.0

NT	5,937	21.7	21,363	78.3							21,363	27,300	78.3
Population Size Group (000's)													
below 2	232,579	63.6	83,815	22.9	43,024	11.8	5,132	1.4	1,229	0.3	133,200	365,779	36.4
2 to 5	657,733	70.0	151,737	16.2	103,254	11.0	26,334	2.8			281,325	939,058	30.0
5 to 50	3,003,204	55.6	1,155,677	21.4	1,083,626	20.1	154,567	2.9			2,393,871	5,397,075	44.4
50 to 500	2,596,391	31.2	3,869,220	46.5	1,377,238	16.5	360,000	4.3	123,000	1.5	5,729,459	8,325,850	68.8
500+	565,502	18.3	792,050	25.6	1,732,704	56.1					2,524,754	3,090,255	81.7
Total	7,055,409	38.9	6,052,498	33.4	4,339,846	24.0	546,033	3.0	124,229	0.7	11,062,607	18,118,016	61.1

Table derived from final MUP91 database (for responding municipalities with rate types), Environmental Economics Branch, Environment Canada.

Table 2 - 1994
Residential Population Served Water by Rate Type, by Province and by Population Size Group

	Flat		Volume-based Rate Types								Total	Rates	Vol.
Province	Rate	%	CUC	%	DBR	%	IBR	%	Complex	%	Vol.-based	Total	%
NF	357,319	99.7	1,234	0.3							1,234	358,552	0.3
PE	38,807	100.0									0	38,807	0.0
NS	72,743	15.6	800	0.2	392,315	84.2					393,115	465,858	84.4
NB	213,680	62.7	32,775	9.6	88,353	25.9	5,804	1.7			126,932	340,612	37.3
QU	3,015,839	80.2	613,248	16.3	31,129	0.8	100,326	2.7			744,703	3,760,542	19.8
ON	1,387,125	16.8	5,085,607	61.5	982,624	11.9	402,838	4.9	417,397	5.0	6,888,466	8,275,590	83.2
MA	17,548	2.3	23,777	3.1	735,416	94.7					759,193	776,741	97.7
SK	8,725	1.4	276,305	43.3	322,646	50.5	29644	4.6	1,129	0.2	629,724	638,449	98.6
AB	69,814	4.3	569,826	34.9	855,841	52.3	139,582	8.5			1,565,249	1,635,063	95.7
BC	2,138,214	76.8	365,894	13.1	187,222	6.7	93,427	3.4			646,543	2,784,757	23.2
YK	19,522	99.1	178	0.9							178	19,700	0.9
NT	4,087	9.8	37,797	90.2							37,797	41,884	90.2
Population Size Group (000's)													
below 2	265,432	62.3	105,390	24.7	44,280	10.4	9,756	2.3	1,129	0.3	160,555	425,987	37.7
2 to 5	700,803	66.9	205,132	19.6	109,803	10.5	31,204	3.0		0.0	346,139	1,046,942	33.1
5 to 50	3,059,332	53.2	1,228,506	21.4	1,149,836	20.0	219,530	3.8	94020	1.6	2,691,892	5,751,224	46.8
50 to 500	2,292,616	29.7	3,580,471	46.3	1,019,627	13.2	511,131	6.6	323377	4.2	5,434,605	7,727,221	70.3
500+	1,025,240	24.5	1,887,941	45.1	1,271,999	30.4		0.0		0.0	3,159,940	4,185,180	75.5
Total	7,343,424	38.4	7,007,440	36.6	3,595,546	18.8	771621	4.0	418,526	2.2	11,793,132	19,136,555	61.6

Table derived from final MUP94 database (for responding municipalities with rate types), Environmental Economics Branch, Environment Canada.

Table 2 - 1996
Residential Population Served Water by Rate Type, by Province and by Population Size Group

	Flat		Volume-based Rate Types								Total	Rates	Vol.
Province	Rate	%	CUC	%	DBR	%	IBR	%	Complex	%	Vol.-based	Total	%
NF	361,291	99.8	884	0.2							884	362,174	0.2
PE	47,433	92.9	3,600	7.1							3,600	51,033	7.1
NS	63,131	12.9			426,278	87.1					426,278	489,408	87.1
NB	234,023	67.8	48,943	14.2	62,255	18.0					111,198	345,221	32.2
QU	3,132,436	78.4	597,721	15.0	36,736	0.9	229,365	5.7			863,822	3,996,258	21.6
ON	1,390,311	15.8	5,516,321	62.8	985,746	11.2	443,782	5.1	443,350	5.0	7,389,198	8,779,509	84.2
MA	16,789	2.1	25,143	3.2	746,028	94.4	2700	0.3			773,871	790,660	97.9
SK	8,312	1.3	295,933	45.3	319,534	48.9	26,894	4.1	2,279	0.3	644,639	652,951	98.7
AB	48,230	2.7	794,659	45.1	140,751	8.0	776,694	44.1			1,712,103	1,760,334	97.3

BC	2,336,524	75.2	468,850	15.1	102,870	3.3	197,403	6.4			769,122	3,105,646	24.8
YK	23,705	98.0	495	2.0							495	24,200	2.0
NT	500	1.1	45,441	98.9							45,441	45,941	98.9
Population Size Group (000's)													
below 2	237,066	59.7	105,651	26.6	44,051	11.1	7,837	2.0	2,279	0.6	159,818	396,884	40.3
2 to 5	680,283	65.9	202,817	19.6	114,142	11.1	31,933	3.1	3300	0.3	352,192	1,032,475	34.1
5 to 50	3,214,127	54.3	1,537,646	26.0	777,564	13.1	282,803	4.8	102500	1.7	2,700,513	5,914,640	45.7
50 to 500	2,415,824	28.1	3,864,303	44.9	1,254,440	14.6	726,660	8.5	337,550	3.9	6,182,953	8,598,776	71.9
500+	1,115,384	25.0	2,087,572	46.8	630,000	14.1	627604	14.1		0.0	3,345,176	4,460,560	75.0
Total	7,662,684	37.6	7,797,988	38.2	2,820,197	13.8	1,676,837	8.2	445629	2.2	12,740,651	20,403,335	62.4

Table derived from final MUP96 database (for responding municipalities with rate types), Environmental Economics Branch, Environment Canada.

Table 2 - 1999
Residential Population Served Water by Rate Type, by Province and by Population Size Group

	Flat		Volume-based Rate Types								Total	Rates	Vol.
Province	Rate	%	CUC	%	DBR	%	IBR	%	Complex	%	Vol.-based	Total	%
NF	357,661	100.0									0	357,661	0.0
PE	35,116	99.0	360	1.0							360	35,476	1.0
NS	48,893	10.0	12,631	2.6	426,412	87.4					439,043	487,936	90.0
NB	191,641	53.6	89,678	25.1	76,112	21.3			343	0.1	166,133	357,774	46.4
QU	3,273,458	79.0	589,057	14.2	40,224	1.0	239,290	5.8			868,571	4,142,029	21.0
ON	1,385,922	15.3	5,701,347	63.1	1,056,154	11.7	436,999	4.8	451,531	5.0	7,646,031	9,031,953	84.7
MA	11,367	1.5	29,109	3.7	737,426	94.5	2700	0.3			769,235	780,602	98.5
SK	8,325	1.2	297,445	44.6	349,597	52.4	11,318	1.7			658,360	666,685	98.8
AB	49,800	2.6	1,026,018	52.7	86,623	4.5	782,752	40.2	1081.1	0.1	1,896,474	1,946,274	97.4
BC	2,469,377	76.7	563,058	17.5	34,879	1.1	78,292	2.4	72,200	2.2	748,429	3,217,806	23.3
YK	14,111	56.8	10,750	43.2							10,750	24,861	43.2
NT	500	1.1	45,767	98.9							45,767	46,267	98.9
Population Size Group (000's)													
below 2	198,748	56.4	103,717	29.4	43,537	12.4	5,118	1.5	1,081	0.3	153,453	352,201	43.6
2 to 5	654,205	68.7	186,045	19.5	84,999	8.9	26,326	2.8	343.44	0.0	297,713	951,918	31.3
5 to 50	3,223,264	52.4	1,894,924	30.8	672,645	10.9	250,157	4.1	107200	1.7	2,924,926	6,148,190	47.6
50 to 500	2,569,559	30.5	3,405,020	40.5	1,386,246	16.5	633,750	7.5	416,531	5.0	5,841,547	8,411,106	69.5
500+	1,200,394	22.9	2,775,515	53.0	620,000	11.9	636000	12.2		0.0	4,031,515	5,231,909	77.1
Total	7,846,170	37.2	8,365,220	39.7	2,807,428	13.3	1,551,351	7.4	525,155	2.5	13,249,154	21,095,324	62.8

Table derived from final MUP99 database (for responding municipalities with rate types), Environmental Economics Branch, Environment Canada.

Table 3 - 1991
Residential Population with Minimum Volume in Volume-based Rate, by Province and by Population Size Group

	Population Served with Minimum Bill Cubic Meters per Month in Minimum Volume				Average Minimum	Total with Minimum	Total Pop. Served	% with Minimum	% with Minimum
Province	no vol.	< 4	4 to 10	> 10	Volume*	Volume	Water	Volume	Vol. > 10
Newfoundland	165,195			400	22.7	400	349,820	0.1	0.1
P.E.I.	35,912					0	36,849	0.0	0.0
Nova Scotia	241,348			120,960	70.8	120,960	436,713	27.7	27.7
New Brunswick	244,113		5,000	52,075	15.2	57,075	324,759	17.6	16.0
Quebec	1,157,901			392,552	21.4	392,552	3,615,657	10.9	10.9
Ontario	4,867,265		487,566	926,173	12.4	1,413,740	7,918,314	17.9	11.7
Manitoba	618,050		122,902	3,300	8.6	126,202	755,051	16.7	0.4

Saskatchewan	199,711	1,171	143,887	253,996	12.0	399,053	603,011	66.2	42.1
Alberta	576,717	28,974	71,906	792,005	10.7	892,885	1,479,669	60.3	53.5
British Columbia	1,191,502		27,565	248,139	22.4	275,704	2,553,573	10.8	9.7
Yukon	15,500					0	17,300	0.0	0.0
North Territories	15,513		3,000	2,850	13.9	5,850	27,300	21.4	10.4
Population Size Group (000's)									
below 2	163,152	1,171	41,253	51,179	12.8	93,603	365,778	25.6	14.0
2 to 5	430,475		81,748	91,222	12.8	172,970	939,058	18.4	9.7
5 to 50	2,425,640	28,974	484,453	622,310	14.4	1,135,737	5,397,075	21.0	11.5
50 to 500	4,411,804		254,372	905,035	21.4	1,159,407	8,325,850	13.9	10.9
500+	1,897,658			1,122,704	11.1	1,122,704	3,090,255	36.3	36.3
Total	9,328,728	30,145	861,826	2,792,450	15.5	3,684,421	18,118,016	20.3	15.4

Table derived from final MUP91 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.
* Average only for those with minimum volumes.

Table 3 - 1994
Residential Population with Minimum Volume in Volume-based Rate, by Province and by Population Size Group

	Population Served with Minimum Bill Cubic Meters per Month in Minimum Volume				Average Minimum	Total with Minimum	Total Pop. Served	% with Minimum	% with Minimum
Province	no vol.	< 4	4 to 10	> 10	Volume*	Volume	Water	Volume	Vol. > 10
Newfoundland	206,312					0	358,552	0.0	0.0
P.E.I.	38,807					0	38,807	0.0	0.0
Nova Scotia	280,066			118,021	64.5	118,021	465,858	25.3	25.3
New Brunswick	244,432		5,385	76,765	33.1	82,150	340,612	24.1	22.5
Quebec	1,293,603	2,364	40,696	325,338	20.3	368,398	3,760,542	9.8	8.7
Ontario	4,725,239	6,685	448,569	302,874	12.8	758,128	8,275,590	9.2	3.7
Manitoba	630,194	1,143	124,574	11,426	9	137,143	776,741	17.7	1.5
Saskatchewan	208,485	4,687	156,493	266,291	11.7	427,471	638,449	67.0	41.7
Alberta	697,445	13,503	716,586	186,182	10.7	916,271	1,635,063	56.0	11.4
British Columbia	1,748,974		28,065	265,217	21.3	293,282	2,784,757	10.5	9.5
Yukon	18,500					0	19,700	0.0	0.0
North Territories	18,527		3,500	2,801	13.4	6,301	41,884	15.0	6.7
Population Size Group (000's)									
below 2	213,705	6,284	38,339	56,841	14.4	101,464	425,988	23.8	13.3
2 to 5	534,196	9,785	100,976	89,168	12.6	199,930	1,046,942	19.1	8.5
5 to 50	2,825,461	12,313	501,216	650,226	14.8	1,163,755	5,751,224	20.2	11.3
50 to 500	4,608,329		256,339	733,679	22.1	990,017	7,727,221	12.8	9.5
500+	1,928,894		626,999	25,000	10.5	651,999	4,185,180	15.6	0.6
Total	10,110,585	28,382	1,523,869	1,554,914	16.1	3,107,165	19,136,555	16.2	8.1

Table derived from final MUP94 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.
* Average only for those with minimum volumes.

Table 3 - 1996
Residential Population with Minimum Volume in Volume-based Rate, by Province and by Population Size Group

	Population Served with Minimum Bill Cubic Meters per Month in Minimum Volume				Average Minimum	Total with Minimum	Total Pop. Served	% with Minimum	% with Minimum
Province	no vol.	< 4	4 to 10	> 10	Volume*	Volume	Water	Volume	Vol. > 10
Newfoundland	188,932			884	127.0	884	362,174	0.2	0.2
P.E.I.	51,033					0	51,033	0.0	0.0
Nova Scotia	378,071			60,332	39.5	60,332	489,408	12.3	12.3
New Brunswick	252,484	42,570	6,006	26,278	21.2	74,854	345,221	21.7	7.6
Quebec	1,739,658	2,419	44,779	389,096	22.6	436,294	3,996,258	10.9	9.7

Ontario	5,812,616	6,701	550,118	390,533	11.6	947,352	8,779,509	10.8	4.4
Manitoba	639,170	1,200	129,831	11,515	8.9	142,546	790,660	18.0	1.5
Saskatchewan	256,102	4,709	151,441	236,709	10.2	392,859	652,951	60.2	36.3
Alberta	858,162	14,685	702,649	167,172	7.3	884,506	1,760,334	50.2	9.5
British Columbia	2,115,123		51,750	211,410	18.3	263,160	3,105,646	8.5	6.8
Yukon	23,705			495	36.6	495	24,200	2.0	2.0
North Territories	24,019		3150	2,600	13.1	5,750	45,941	12.5	5.7
Population Size Group (000's)									
below 2	212,374	7,413	42,870	51,992	15.6	102,275	396,884	25.8	13.1
2 to 5	564,663	9,901	98,790	105,153	12.8	213,844	1,032,475	20.7	10.2
5 to 50	3,201,921	54,970	505,027	534,584	13.7	1,094,580	5,914,640	18.5	9.0
50 to 500	5,644,960		365,434	800,096	16.4	1,165,529	8,598,776	13.6	9.3
500+	2,715,157		627,604	5,200	5.1	632,804	4,460,560	14.2	0.1
Total	12,339,075	72,284	1,639,725	1,497,024	13.0	3,209,033	20,403,335	15.7	7.3

Table derived from final MUP96 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.
* Average only for those with minimum volumes.

Table 3 - 1999
Residential Population with Minimum Volume in Volume-based Rate, by Province and by Population Size Group

	Population Served with Minimum Bill Cubic Meters per Month in Minimum Volume				Average Minimum	Total with Minimum	Total Pop. Served	% with Minimum	% with Minimum
Province	no vol.	< 4	4 to 10	> 10	Volume*	Volume	Water	Volume	Vol. > 10
Newfoundland	180,426					0	357,661	0.0	0.0
P.E.I.	35,476					0	35,476	0.0	0.0
Nova Scotia	441,812			10,038	18.6	10,038	487,936	2.1	2.1
New Brunswick	317,293	3,036	4,940	9,242	14.1	17,218	357,774	4.8	2.6
Quebec	2,050,094		48,529	434,535	22.1	483,064	4,142,029	11.7	10.5
Ontario	5,241,685	38,125	850,821	472,183	11.4	1,361,129	9,031,953	15.1	5.2
Manitoba	626,668		136,228	11,531	9.1	147,759	780,602	18.9	1.5
Saskatchewan	284,007		338,968	43,710	8.7	382,678	666,685	57.4	6.6
Alberta	1,067,564	18,397	728,925	111,117	7.2	858,439	1,946,274	44.1	5.7
British Columbia	2,413,796		52,394	119,681	17.9	172,075	3,217,806	5.3	3.7
Yukon	14,111			10,750	38.3	10,750	24,861	43.2	43.2
North Territories	23,700		3150	1,250	11.6	4,400	46,267	9.5	2.7
Population Size Group (000's)									
below 2	201,760	1,272	48,304	48,323	12.8	97,899	352,201	27.8	13.7
2 to 5	575,809	5,200	88,207	90,126	12.8	183,533	951,918	19.3	9.5
5 to 50	3,679,856	53,086	503,350	602,717	14.7	1,159,153	6,148,190	18.9	9.8
50 to 500	5,949,683		596,849	477,330	13.5	1,074,179	8,411,106	12.8	5.7
500+	2,289,526		927,244	5,540	6.3	932,784	5,231,909	17.8	0.1
Total	12,696,634	59,558	2,163,955	1,224,036	11.9	3,447,549	21,095,324	16.3	5.8

Table derived from final MUP99 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.
* Average only for those with minimum volumes.

Table 4 - 1991
Residential Population Served with Flat Rates By Price Level, by Province and by Population Size Group

	Population Served by Flat Rates by Price Level ($1991/month)				Flat Rate	Variation from Nat.
Province	<6.5	6.5-13	13-20	>20	Mean*	Mean
Newfoundland		62,668	265,235	8,637	14.39	-0.58
P.E.I.		3,002	31,255	2,592	18.22	3.25
Nova Scotia		26,522	44,564	3,631	14.64	-0.33

New Brunswick	2,723	10,938	108,515	111,959	25.06	10.09
Quebec	210,604	1,172,944	1,284,632	163,558	13.17	-1.80
Ontario	8,200	164,161	766,002	531,373	19.56	4.59
Manitoba		1,791	4,326	11,732	26.15	11.18
Saskatchewan		176	2,516	3,764	23.62	8.65
Alberta		5,392	19,700	46,976	24.90	9.93
British Columbia	237,842	1,016,932	519,834	177,475	12.28	-2.69
Yukon			1,800	15,500	27.28	12.31
North Territories		1,287		4,650	44.61	29.64
Population Size Group (000's)						
below 2	6,173	69,013	91,691	65,702	17.31	2.34
2 to 5	49,654	216,038	216,284	175,758	16.31	1.34
5 to 50	213,749	1,116,675	1,144,428	528,353	15.00	0.03
50 to 500	189,793	1,064,088	1,030,475	312,035	14.15	-0.82
500+			565,502		16.08	1.11
Total	459,369	2,465,814	3,048,380	1,081,847	14.97	

Table derived from final MUP91 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.
* Mean price for flat rates only, no assessed included.

Table 4 - 1994
Residential Population Served with Flat Rates By Price Level, by Province and by Population Size Group

	Population Served by Flat Rates by Price Level ($1994/month)*				Flat Rate	Variation from Nat.
Province	<6.75	6.75-13.5	13.5-20.75	>20.75	Mean**	Flat Mean
Newfoundland	3,555	167,490	169,185	17,089	15.37	-2.23
P.E.I.		3,398	33,009	2,400	18.88	1.28
Nova Scotia		26,646	39,686	6,411	14.94	-2.66
New Brunswick	646	12,486	86,373	114,176	21.26	3.66
Quebec	141,103	1,387,117	1,231,089	256,531	14.28	-3.32
Ontario	2,700	122,605	190,204	1,071,615	23.62	6.02
Manitoba		1,757	4,111	11,680	27.09	9.49
Saskatchewan		53	2,172	6,500	28.11	10.51
Alberta		5,307	9,721	54,786	27.42	9.82
British Columbia	43,691	242,273	1,360,429	491,822	17.80	0.20
Yukon			1,200	18,322	36.98	19.38
North Territories		1050		3,037	40.35	22.75
Population Size Group (000's)						
below 2	9,885	72,243	96,983	86,321	19.17	1.57
2 to 5	51,210	198,749	254,776	196,069	17.57	-0.03
5 to 50	125,399	1,199,574	1,130,383	603,977	16.47	-1.13
50 to 500	5,200	494,410	1,170,037	622,969	19.01	1.41
500+		5,206	475,000	545,034	17.47	-0.13
Total	191,694	1,970,181	3,127,179	2,054,370	17.60	

Table derived from final MUP94 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.
* Price levels have been adjusted for inflation to be roughly equivalent to 1991 levels.
** Mean price for flat rates only, no assessed included.

Table 4 - 1996
Residential Population Served with Flat Rates By Price Level, by Province and by Population Size Group

	Population Served by Flat Rates by Price Level ($1996/month)*				Flat Rate	Variation from Nat.
Province	<7.0	7.0-14.0	14.0-21.5	>21.5	Mean**	Mean

Newfoundland		152,231	134,329	74,731	16.94	-2.86
P.E.I.		1,833	14,000	31,600	22.51	2.71
Nova Scotia		20,080	42,898	153	15.81	-3.99
New Brunswick	5,209	11,595	13,355	203,864	25.60	5.80
Quebec	203,816	1,147,348	1,288,217	493,055	15.92	-3.88
Ontario	3,718	76,467	789,841	520,285	24.92	5.12
Manitoba		1,741	4,114	10,934	26.88	7.08
Saskatchewan		27	2,199	6,086	28.51	8.71
Alberta		5,500	12,134	30,596	27.37	7.57
British Columbia	1,100	216,277	769,284	1,349,863	21.37	1.57
Yukon				23,705	43.16	23.36
North Territories				500	85.50	65.70
Population Size Group (000's)						
below 2	9,939	53,654	81,485	91,988	21.24	1.44
2 to 5	38,655	178,483	227,803	235,342	19.35	-0.45
5 to 50	165,249	1,083,103	1,090,679	875,096	17.87	-1.93
50 to 500		312,414	560,465	1,542,945	22.87	3.07
500+		5,444	1,109,940		18.65	-1.15
Total	213,843	1,633,098	3,070,371	2,745,371	19.80	

Table derived from final MUP96 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.

* Price levels have been adjusted for inflation to be roughly equivalent to 1991 levels.

** Mean price for flat rates only, no assessed included.

Table 4 - 1999

Residential Population Served with Flat Rates By Price Level, by Province and by Population Size Group

	Population Served by Flat Rates by Price Level ($1999/month)				Flat Rate	Variation from Nat.
Province	<7.25	7.25-14.5	14.5-22.25	>22.25	Mean	Mean
Newfoundland		15,507	266,875	75,279	18.52	-3.88
P.E.I.		1,383		33,733	24.21	1.81
Nova Scotia		16,009	28,203	4,681	17.05	-5.34
New Brunswick		9,589	18,375	163,677	29.60	7.21
Quebec	245,253	1,041,501	1,395,541	591,164	16.78	-5.62
Ontario		68,406	479,008	838,508	27.73	5.34
Manitoba		199	1,504	9,664	30.75	8.35
Saskatchewan			2,173	6,152	32.04	9.65
Alberta		5,542	105	44,153	30.82	8.43
British Columbia	1,202	69,426	700,077	1,698,671	26.52	4.12
Yukon				14,111	49.61	27.22
North Territories				500	85.19	62.80
Population Size Group (000's)						
below 2	8,791	37,219	70,489	82,249	21.81	-0.59
2 to 5	27,216	138,722	227,670	260,597	21.77	-0.63
5 to 50	96,092	894,301	1,134,564	1,098,307	20.14	-2.25
50 to 500	114,356	151,708	587,517	1,715,978	25.51	3.11
500+		5,611	871,622	323,162	22.22	-0.17
Total	246,455	1,227,561	2,891,862	3,480,293	22.40	

Table derived from final MUP99 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.

* Price levels have been adjusted for inflation to be roughly equivalent to 1991 levels.

** Mean price for flat rates only, no assessed included.

Table 5 - 1991

Residential Unit Prices ($/cubic metre) for Volume-based Rate Schedules, by Province and by Population Size Group

	Constant Unit Charges	First Block Prices	Last Block Prices

Province	Mean	Median	%ile 10	%ile 90	Mean	Median	%ile 10	%ile 90	Mean	Median	%ile 10	%ile 90
Newfoundland	0.24	0.24	**	**	0.15	0.15	**	**	0.09	0.09	**	**
P.E.I.	***	***	***	***	***	***	***	***	***	***	***	***
Nova Scotia	0.30	0.30	**	**	0.40	0.40	0.26	0.62	0.28	0.33	0.13	0.44
New Brunswick	0.86	0.96	0.69	0.96	0.83	0.86	0.64	0.86	0.58	0.58	0.40	0.69
Quebec	0.36	0.33	0.24	0.62	0.29	0.25	0.24	0.33	0.48	0.33	0.30	0.83
Ontario	0.81	0.76	0.48	1.21	0.70	0.72	0.41	0.92	0.54	0.56	0.29	0.80
Manitoba	0.89	0.97	0.57	1.29	0.99	0.98	0.98	0.98	0.76	0.77	0.71	0.77
Saskatchewan	1.06	1.21	0.70	1.21	0.85	0.75	0.68	1.17	0.66	0.58	0.41	1.10
Alberta	0.89	0.91	0.54	1.11	1.27	1.46	0.47	1.46	0.97	1.12	0.30	1.12
British Columbia	0.21	0.20	0.17	0.29	0.35	0.23	0.18	0.86	0.32	0.22	0.08	0.75
Yukon	***	***	***	***	***	***	***	***	***	***	***	***
North Territories	2.00	2.20	0.60	2.27	***	***	***	***	***	***	***	***
Population Size Group (000's)												
below 1 (sample)	0.52	0.65	0.38	0.65	***	***	***	***	***	***	***	***
1 to 2	0.74	0.77	0.25	1.24	0.87	0.85	0.33	1.58	0.67	0.65	0.11	1.43
2 to 5	0.75	0.66	0.25	1.29	0.74	0.68	0.36	1.24	0.56	0.44	0.10	1.19
5 to 50	0.64	0.56	0.22	1.11	0.74	0.72	0.26	1.43	0.53	0.53	0.15	1.01
50 to 500	0.74	0.76	0.25	1.21	0.63	0.72	0.26	0.92	0.49	0.56	0.22	0.80
500+	0.89	0.86	0.86	1.05	1.04	0.98	0.62	1.46	0.83	0.77	0.56	1.12
Total	0.75	0.76	0.25	1.21	0.81	0.72	0.33	1.46	0.62	0.58	0.24	1.12

Table derived from final MUP91 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.
** not enough rate structures to determine value
*** no rate structures apply

Table 5 - 1994
Residential Unit Prices ($/cubic metre) for Volume-based Rate Schedules, by Province and by Population Size Group

	Constant Unit Charges				First Block Prices				Last Block Prices			
Province	Mean	Median	%ile 10	%ile 90	Mean	Median	%ile 10	%ile 90	Mean	Median	%ile 10	%ile 90
Newfoundland	0.15	0.11	**	**	***	***	***	***	***	***	***	***
P.E.I.	***	***	***	***	***	***	***	***	***	***	***	***
Nova Scotia	0.73	0.73	**	**	0.43	0.40	0.26	0.58	0.27	0.22	0.09	0.46
New Brunswick	0.58	0.53	0.53	0.89	0.87	0.92	0.69	1.01	0.66	0.76	0.34	0.76
Quebec	0.45	0.40	0.24	0.78	0.33	0.22	0.22	0.78	0.50	0.55	0.18	0.83
Ontario	0.92	0.87	0.62	1.39	0.85	0.92	0.40	1.00	0.66	0.65	0.36	1.11
Manitoba	0.92	0.87	0.57	1.37	1.28	1.29	1.28	1.29	1.01	1.05	0.72	1.05
Saskatchewan	1.21	1.41	0.70	1.41	0.87	0.75	0.69	1.23	0.63	0.51	0.42	1.01
Alberta	1.08	1.19	0.44	1.46	1.39	1.69	0.53	1.69	1.13	1.31	0.61	1.31
British Columbia	0.37	0.32	0.22	0.69	0.38	0.31	0.18	0.57	0.31	0.26	0.08	0.60
Yukon	0.99	0.99	**	**	***	***	***	***	***	***	***	***
North Territories	2.86	2.31	1.45	4.46	***	***	***	***	***	***	***	***
Population Size Group (000's)												
below 1 (sample)	2.49	1.26	0.44	5.00	0.77	0.44	**	**	0.61	0.66	**	**
1 to 2	1.13	0.82	0.26	2.21	0.87	0.77	0.34	1.58	0.71	0.65	0.18	1.43
2 to 5	0.84	0.74	0.30	1.52	0.78	0.71	0.33	1.25	0.61	0.59	0.12	1.19
5 to 50	0.74	0.70	0.24	1.26	0.84	0.79	0.29	1.36	0.62	0.65	0.17	1.01
50 to 500	0.92	0.87	0.38	1.41	0.71	0.79	0.28	1.00	0.59	0.55	0.27	1.11
500+	0.88	0.82	0.76	1.19	1.47	1.29	**	**	1.16	1.05	**	**
Total	0.88	0.82	0.38	1.39	0.96	0.92	0.36	1.69	0.75	0.66	0.27	1.31

Table derived from final MUP94 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.
** not enough rate structures to determine value
*** no rate structures apply

Table 5 - 1996

Residential Unit Prices ($/cubic metre) for Volume-based Rate Schedules, by Province and by Population Size Group

	Constant Unit Charges				First Block Prices				Last Block Prices			
Province	Mean	Median	%ile 10	%ile 90	Mean	Median	%ile 10	%ile 90	Mean	Median	%ile 10	%ile 90
Newfoundland	0.11	0.11	**	**	***	***	***	***	***	***	***	***
P.E.I.	0.64	0.64	**	**	***	***	***	***	***	***	***	***
Nova Scotia	***	***	***	***	0.58	0.58	0.35	0.80	0.41	0.47	0.13	0.64
New Brunswick	0.87	0.93	0.53	1.46	0.87	0.92	0.69	0.92	0.63	0.76	0.18	0.76
Quebec	0.45	0.42	0.27	0.78	0.35	0.33	0.22	0.49	0.48	0.44	0.33	0.80
Ontario	0.94	0.93	0.74	1.36	0.97	0.92	0.50	1.47	0.76	0.65	0.36	1.58
Manitoba	1.02	1.12	0.57	1.37	1.54	1.59	1.38	1.59	1.26	1.34	0.78	1.34
Saskatchewan	1.24	1.41	0.81	1.41	1.11	1.13	0.69	1.39	0.80	0.81	0.42	0.92
Alberta	1.12	1.26	0.69	1.36	1.33	1.58	0.54	1.58	1.40	1.65	0.72	1.65
British Columbia	0.45	0.39	0.28	0.81	0.35	0.14	0.05	0.65	0.54	0.43	0.18	0.84
Yukon	0.86	0.77	**	**	***	***	***	***	***	***	***	***
North Territories	3.10	2.62	2.60	4.26	***	***	***	***	***	***	***	***
Population Size Group (000's)												
below 1 (sample)	3.55	3.86	1.00	5.00	1.13	1.13	**	**	0.57	0.57	**	**
1 to 2	1.21	0.88	0.30	2.21	0.92	0.84	0.34	1.65	0.75	0.66	0.20	1.43
2 to 5	0.96	0.85	0.35	1.57	0.80	0.80	0.33	1.30	0.61	0.60	0.13	1.19
5 to 50	0.80	0.75	0.28	1.24	0.94	0.81	0.41	1.64	0.73	0.70	0.31	1.35
50 to 500	0.94	0.95	0.39	1.41	0.78	0.81	0.28	1.47	0.68	0.63	0.36	1.58
500+	0.93	0.85	0.79	1.26	1.59	1.59	**	**	1.49	1.34	**	**
Total	0.92	0.88	0.40	1.36	1.03	0.95	0.34	1.59	0.90	0.76	0.36	1.65

Table derived from final MUP96 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.
** not enough rate structures to determine value
*** no rate structures apply

Table 5 - 1999
Residential Unit Prices ($/cubic metre) for Volume-based Rate Schedules, by Province and by Population Size Group

	Constant Unit Charges				First Block Prices				Last Block Prices			
Province	Mean	Median	%ile 10	%ile 90	Mean	Median	%ile 10	%ile 90	Mean	Median	%ile 10	%ile 90
Newfoundland	***	***	***	***	***	***	***	***	***	***	***	***
P.E.I.	0.64	0.64	**	**	***	***	***	***	***	***	***	***
Nova Scotia	0.50	0.41	**	**	0.65	0.74	0.39	0.74	0.51	0.64	0.15	0.64
New Brunswick	1.11	0.94	0.93	1.58	0.69	0.64	0.64	0.93	0.39	0.39	0.39	0.43
Quebec	0.46	0.42	0.27	0.78	0.37	0.36	0.22	0.51	0.50	0.50	0.33	0.66
Ontario	0.98	0.98	0.68	1.32	0.98	0.93	0.57	1.47	0.79	0.70	0.36	1.58
Manitoba	0.99	0.87	0.66	1.37	1.80	1.89	1.38	1.89	1.38	1.48	0.76	1.48
Saskatchewan	1.24	1.38	0.82	1.38	1.14	1.12	0.71	1.44	0.82	0.85	0.43	0.98
Alberta	1.18	1.29	0.54	1.60	1.37	1.58	0.55	1.58	1.46	1.65	0.86	1.65
British Columbia	0.48	0.44	0.28	0.83	1.03	0.36	0.15	2.20	0.88	0.70	0.18	1.66
Yukon	1.10	1.12	**	**	***	***	***	***	***	***	***	***
North Territories	3.17	2.62	2.60	4.26	***	***	***	***	***	***	***	***
Population Size Group (000's)												
below 1 (sample)	1.58	0.74	**	**	1.13	1.13	**	**	0.57	0.57	**	**
1 to 2	1.36	0.92	0.30	2.71	1.02	1.03	0.34	1.97	0.77	0.80	0.18	1.43
2 to 5	1.00	0.89	0.32	1.62	0.88	0.99	0.36	1.36	0.71	0.65	0.18	1.27
5 to 50	0.91	0.92	0.34	1.45	0.94	0.82	0.36	1.59	0.74	0.75	0.33	1.15
50 to 500	0.94	0.87	0.42	1.38	0.89	0.84	0.35	1.47	0.75	0.66	0.36	1.58
500+	0.99	1.01	0.75	1.29	1.73	1.58	**	**	1.57	1.65	**	**
Total	0.96	0.97	0.44	1.35	1.12	1.07	0.37	1.89	0.96	0.77	0.36	1.65

Table derived from final MUP99 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.
** not enough rate structures to determine value
*** no rate structures apply

Table 6 - 1991

Total Residential Volume-based Water Prices ($/month) for Selected Volumes of Service, by Province and by Population Size Group

	10 cubic meters per month				25 cubic meters per month				35 cubic meters per month			
Province	Mean	Median	%ile 10	%tile 90	Mean	Median	%ile 10	%ile 90	Mean	Median	%ile 10	%ile 90
Newfoundland	2.40	2.40	**	**	6.00	6.00	**	**	8.40	8.40	**	**
P.E.I.	***	***	***	***	***	***	***	***	***	***	***	***
Nova Scotia	16.87	18.22	12.20	19.37	20.75	20.22	19.37	22.27	23.34	22.52	19.37	27.7
New Brunswick	21.25	19.15	11.49	27.83	33.81	32.17	22.84	40.43	42.07	41.77	29.74	48.83
Quebec	7.90	6.47	4.40	14.58	11.45	10.50	5.69	16.72	15.06	12.95	8.29	22.38
Ontario	11.92	12.20	6.53	15.80	23.82	23.33	14.40	34.00	31.91	30.93	20.60	46.60
Manitoba	13.55	13.65	12.34	13.65	28.51	28.35	26.89	28.35	38.38	38.15	36.59	38.15
Saskatchewan	17.35	18.50	12.25	21.71	29.63	29.55	27.03	32.48	38.97	38.71	35.45	43.26
Alberta	18.05	13.25	13.25	27.69	33.66	32.11	29.50	40.24	44.40	44.91	36.40	52.83
British Columbia	9.43	9.49	4.40	17.78	12.99	11.67	7.70	21.37	15.73	12.62	9.90	27.07
Yukon	***	***	***	***	***	***	***	***	***	***	***	***
North Territories	33.35	32.64	**	**	53.78	66.69	**	**	68.89	89.39	**	**
Population Size Group (000's)												
below 1 (sample)	23.83	23.83	**	**	32.93	32.93	**	**	39.43	39.43	**	**
1 to 2	19.59	19.15	8.87	31.50	30.25	28.75	17.87	44.43	38.04	37.92	21.32	55.14
2 to 5	18.05	15.96	8.60	32.19	28.37	28.00	17.25	39.28	35.96	35.50	19.10	51.14
5 to 50	15.16	13.92	7.47	25.70	24.54	22.80	10.71	40.24	31.22	28.45	13.22	52.83
50 to 500	12.61	12.20	7.47	18.70	23.47	21.50	12.04	34.00	30.97	28.35	13.74	46.19
500+	11.71	13.25	**	**	25.57	28.35	**	**	35.09	38.15	**	**
Total	13.09	12.64	6.53	19.20	24.48	25.32	14.40	34.00	32.39	33.00	18.47	45.75

Table derived from final MUP91 database (for volume-based rates from responding municipalities), Environmental Economics Branch, Environment Canada.

** not enough rate structures to determine value

*** no applicable rate structures

Table 6 - 1994

Total Residential Volume-based Water Prices ($/month) for Selected Volumes of Service, by Province and by Population Size Group

	10 cubic meters per month				25 cubic meters per month				35 cubic meters per month			
Province	Mean	Median	%ile 10	%ile 90	Mean	Median	%ile 10	%ile 90	Mean	Median	%ile 10	%ile 90
Newfoundland	12.60	15.10	**	**	14.89	16.75	**	**	16.41	17.85	**	**
P.E.I.	***	***	***	***	***	***	***	***	***	***	***	***
Nova Scotia	17.38	18.33	10.00	22.42	21.38	20.89	15.92	31.09	24.07	20.89	18.05	34.26
New Brunswick	24.34	19.31	16.00	40.07	35.38	34.40	25.00	40.43	41.85	43.60	29.74	48.83
Quebec	9.15	7.78	2.20	16.50	13.73	13.50	6.19	22.50	18.00	19.22	8.29	27.98
Ontario	14.42	15.00	8.20	22.00	27.65	27.14	20.50	40.13	36.58	34.67	26.23	53.20
Manitoba	16.79	17.10	15.35	17.10	35.93	36.45	34.55	36.45	48.58	49.35	47.35	49.35
Saskatchewan	17.38	18.85	12.81	25.40	30.11	32.48	22.54	38.74	39.74	43.23	28.09	48.18
Alberta	21.61	20.44	15.27	31.38	40.11	39.99	35.25	43.63	52.27	54.89	42.87	56.70
British Columbia	13.68	11.67	5.90	20.75	18.15	15.51	10.70	28.42	21.79	18.91	12.62	35.32
Yukon	38.55	38.55	**	**	38.55	38.55	**	**	38.55	38.55	**	**
North Territories	40.47	43.70	30.00	44.60	82.78	78.35	38.28	111.50	111.36	101.40	50.75	156.10
Population Size Group (000's)												
below 1 (sample)	32.94	38.55	16.67	50.00	63.13	57.45	23.16	125.00	84.52	70.05	29.76	175.00
1 to 2	22.37	20.32	10.92	38.00	36.63	30.25	17.87	58.50	46.85	38.35	21.47	74.65
2 to 5	20.39	19.09	9.75	31.76	31.26	31.84	16.25	45.62	39.38	38.21	19.91	56.13
5 to 50	17.77	16.66	8.20	29.24	28.53	27.07	13.00	43.58	36.04	34.38	17.59	56.61
50 to 500	14.76	15.20	8.20	22.00	26.91	26.98	12.09	41.30	35.38	34.65	16.09	54.70

500+	14.29	15.27	8.20	17.10	30.85	28.29	20.50	39.99	41.59	35.89	28.70	54.89
Total	15.60	15.35	8.20	23.50	28.62	28.29	16.50	41.30	37.49	35.89	20.22	54.89

Table derived from final MUP94 database (for volume-based rates from responding municipalities), Environmental Economics Branch, Environment Canada.
** not enough rate structures to determine value
*** no applicable rate structures

Table 6 - 1996
Total Residential Volume-based Water Prices ($/month) for Selected Volumes of Service, by Province and by Population Size Group

	10 cubic meters per month				25 cubic meters per month				35 cubic meters per month			
Province	Mean	Median	%ile 10	%ile 90	Mean	Median	%ile 10	%ile 90	Mean	Median	%ile 10	%ile 90
Newfoundland	17.00	17.00	**	**	17.00	17.00	**	**	17.00	17.00	**	**
P.E.I.	30.00	30.00	**	**	39.00	39.00	**	**	46.00	46.00	**	**
Nova Scotia	18.27	17.00	12.00	27.00	25.69	27.00	17.00	33.00	30.83	33.00	17.00	40.00
New Brunswick	27.55	23.00	17.00	42.00	38.09	36.00	28.00	45.00	46.13	46.00	34.00	54.00
Quebec	9.17	8.00	4.00	17.00	13.44	10.00	8.00	23.00	17.60	14.00	10.00	27.00
Ontario	15.18	16.00	8.00	20.00	29.04	30.00	20.00	40.00	38.51	39.00	28.00	51.00
Manitoba	19.25	20.00	16.00	20.00	42.19	44.00	37.00	44.00	57.42	60.00	51.00	60.00
Saskatchewan	18.66	20.00	14.00	26.00	35.31	36.00	30.00	43.00	46.24	48.00	38.00	55.00
Alberta	23.47	23.00	17.00	32.00	41.28	40.00	36.00	46.00	53.78	56.00	42.00	58.00
British Columbia	15.19	11.00	8.00	31.00	20.97	17.00	11.00	36.00	26.53	21.00	15.00	43.00
Yukon	31.73	27.00	**	**	31.73	27.00	**	**	31.73	27.00	**	**
North Territories	41.04	43.00	33.00	48.00	86.48	82.00	68.00	106.00	117.35	108.00	94.00	149.00
Population Size Group (000's)												
below 1 (sample)	40.04	43.00	18.00	54.00	83.00	96.00	26.00	125.00	114.46	135.00	36.00	175.00
1 to 2	24.29	22.00	13.00	39.00	39.50	34.00	21.00	62.00	50.36	43.00	26.00	75.00
2 to 5	21.34	21.00	10.00	34.00	33.01	32.00	17.00	47.00	41.86	40.00	21.00	57.00
5 to 50	19.04	17.00	9.00	30.00	30.56	31.00	15.00	45.00	38.95	39.00	18.00	57.00
50 to 500	15.15	16.00	8.00	20.00	27.97	30.00	14.00	40.00	36.93	39.00	17.00	54.00
500+	16.48	17.00	8.00	27.00	34.10	31.00	20.00	46.00	45.91	39.00	28.00	60.00
Total	16.62	17.00	8.00	27.00	30.43	31.00	17.00	44.00	40.05	39.00	21.00	58.00

Table derived from final MUP96 database (for volume-based rates from responding municipalities), Environmental Economics Branch, Environment Canada.
** not enough rate structures to determine value

Table 6 - 1999
Total Residential Volume-based Water Prices ($/month) for Selected Volumes of Service, by Province and by Population Size Group

	10 cubic meters per month				25 cubic meters per month				35 cubic meters per month			
Province	Mean	Median	%ile 10	%ile 90	Mean	Median	%ile 10	%ile 90	Mean	Median	%ile 10	%ile 90
Newfoundland	***	***	***	***	***	***	***	***	***	***	***	***
P.E.I.	29.73	29.73	**	**	39.33	39.33	**	**	45.73	45.73	**	**
Nova Scotia	22.72	24.30	12.82	27.01	32.34	35.40	17.92	35.40	38.79	42.80	21.73	42.80
New Brunswick	24.72	24.07	15.80	30.60	36.96	38.17	32.67	44.55	45.94	47.57	39.07	55.30
Quebec	9.95	8.25	6.25	16.70	14.34	13.70	8.25	23.00	18.53	17.64	10.59	27.98
Ontario	15.59	15.52	7.50	21.31	30.00	30.45	18.75	39.96	39.83	39.15	26.25	54.45
Manitoba	21.96	23.25	16.31	23.25	48.42	51.60	37.01	51.60	66.04	70.50	50.81	70.50
Saskatchewan	20.41	19.10	17.10	25.50	37.49	36.38	29.29	43.36	48.60	50.78	37.85	57.04
Alberta	24.08	25.46	16.75	33.59	42.84	40.45	35.81	48.30	55.71	56.25	45.78	60.90
British Columbia	16.07	12.20	7.75	31.36	22.73	18.01	13.75	42.05	29.19	22.41	17.75	52.11
Yukon	42.41	43.50	**	**	42.41	43.50	**	**	42.41	43.50	**	**
North Territories	41.45	42.73	33.00	48.00	87.20	82.03	67.50	106.50	117.97	108.20	94.50	149.10
Population Size Group (000's)												
below 1	31.00	17.75	**	**	48.30	26.62	**	**	62.31	34.02	**	**

(sample)												
1 to 2	26.21	24.18	14.45	42.50	43.31	39.62	21.50	67.75	55.60	49.54	27.30	93.97
2 to 5	23.20	22.40	11.57	37.50	36.16	34.72	18.42	53.21	45.71	43.82	23.12	66.65
5 to 50	20.04	18.15	9.47	31.69	32.58	32.25	16.25	52.46	41.73	42.08	19.55	66.46
50 to 500	16.47	16.70	7.52	24.30	29.71	31.45	14.68	42.16	38.93	40.75	19.42	57.04
500+	16.50	16.75	7.50	27.26	34.85	31.38	18.75	51.60	47.09	40.08	26.25	70.50
Total	17.53	16.75	7.52	27.26	32.21	31.45	18.00	46.61	42.38	40.75	22.18	59.51

Table derived from final MUP99 database (for volume-based rates from responding municipalities), Environmental Economics Branch, Environment Canada.
** not enough rate structures to determine value
*** no applicable rate
structures

Table 7 - 1991, 94, 96 and 99
Residential Pricing Trends ($1999) for Constant Unit Charge, First Block and Marginal Prices (>0), by Province and by Population Size Group

	Constant Unit Prices				First Block Prices				Mean Marginal Price at 35 m3			
Province	1991	1994	1996	1999	1991	1994	1996	1999	1991	1994	1996	1999
Newfoundland	0.27	0.17	0.12	***	0.17	***	***	***	0.27	0.17	***	***
P.E.I.	***	***	0.67	0.64	***	***	***	***	***	***	0.67	0.64
Nova Scotia	0.34	0.79	***	0.50	0.46	0.47	0.60	0.65	0.46	0.42	0.61	0.64
New Brunswick	0.97	0.63	0.92	1.11	0.93	0.94	0.91	0.69	0.93	0.91	0.98	0.91
Quebec	0.41	0.49	0.47	0.46	0.33	0.36	0.37	0.37	0.41	0.48	0.48	0.46
Ontario	0.91	1.00	0.99	0.98	0.79	0.93	1.02	0.98	0.87	0.99	0.98	1.00
Manitoba	1.00	1.00	1.07	0.99	1.12	1.39	1.62	1.80	1.11	1.37	1.59	1.76
Saskatchewan	1.19	1.32	1.30	1.24	0.96	0.95	1.17	1.14	1.02	1.03	1.12	1.10
Alberta	1.00	1.17	1.17	1.18	1.43	1.51	1.39	1.37	1.20	1.34	1.32	1.30
British Columbia	0.24	0.40	0.48	0.48	0.40	0.41	0.37	1.03	0.35	0.41	0.50	0.63
Yukon	***	1.08	0.90	1.10	***	***	***	***	***	***	0.81	0.77
North Territories	2.25	3.11	3.25	3.17	***	***	***	***	2.25	3.11	3.25	3.17
Population Size Group (000's)												
below 1 (sample)	0.59	2.71	3.72	1.58	***	0.84	1.18	1.13	0.59	2.35	3.31	1.47
1 to 2	0.83	1.23	1.26	1.36	0.98	0.95	0.96	1.02	0.87	1.12	1.17	1.23
2 to 5	0.85	0.91	1.01	1.00	0.83	0.84	0.84	0.88	0.85	0.90	0.95	0.98
5 to 50	0.73	0.81	0.84	0.91	0.84	0.91	0.99	0.94	0.79	0.86	0.90	0.94
50 to 500	0.84	1.01	0.98	0.94	0.72	0.77	0.82	0.89	0.81	0.95	0.93	0.93
500+	1.01	0.95	0.97	0.99	1.18	1.60	1.66	1.73	1.07	1.17	1.23	1.23
Total	0.84	[illegible]	0.96	0.96	0.91	1.04	1.08	1.12	0.87	0.99	1.01	1.03

Table derived from final MUP91, 94 [illegible] 99 databases (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.
*** no rate structures apply

Table 8 - 1991
Total Residential Water Prices ($/month) for Selected Volumes of Service, by Province and by Population Size Group

	10 cubic meters per month				25 cubic meters per month				35 cubic meters per month			
Province	Mean	Median	%ile 10	%ile 90	Mean	Median	%ile 10	%ile 90	Mean	Median	%ile 10	%ile 90
Newfoundland	13.95	13.33	10.00	18.33	14.09	13.33	10.00	18.33	14.18	13.33	10.00	18.33
P.E.I.	18.22	18.05	15.94	18.68	18.22	18.05	15.94	18.68	18.22	18.05	15.94	18.68
Nova Scotia	16.75	18.22	11.80	19.37	20.10	19.83	14.10	22.27	22.34	22.52	15.10	27.70
New Brunswick	23.43	17.59	15.00	43.99	26.43	25.67	16.88	43.99	28.56	26.33	16.88	43.99
Quebec	12.19	11.67	6.00	18.25	12.98	13.33	6.45	18.33	13.74	13.50	7.17	19.58
Ontario	13.55	12.60	6.60	19.25	22.58	20.39	14.40	33.25	28.74	26.60	16.08	43.35
Manitoba	13.84	13.65	12.34	13.65	28.44	28.35	25.77	28.35	38.07	38.15	35.27	38.15
Saskatchewan	17.46	18.00	12.25	21.71	29.47	29.55	24.70	32.58	38.65	38.71	30.38	43.26
Alberta	19.04	17.47	13.25	27.69	33.67	32.11	26.49	39.75	43.74	44.91	29.29	51.56
British Columbia	11.79	9.67	6.42	19.05	12.65	10.00	6.58	20.73	13.39	11.01	6.75	22.46
Yukon	27.28	28.15	**	**	27.28	28.15	**	**	27.28	28.15	**	**
North Territories	39.55	41.00	30.00	50.00	62.19	66.69	38.28	74.00	77.85	89.39	44.28	96.00
Population Size Group (000's)												
below 1 (sample)	18.72	22.50	7.50	38.36	20.15	22.50	7.50	38.36	21.31	22.50	7.50	39.43
1 to 2	17.94	16.67	8.33	30.00	21.78	19.88	9.00	36.14	24.56	20.50	9.17	44.12
2 to 5	16.79	15.00	7.47	28.33	19.67	17.54	8.00	34.88	21.91	18.00	8.00	40.75
5 to 50	15.13	13.92	7.20	25.75	19.26	16.69	8.50	32.28	22.26	18.05	8.75	41.03
50 to 500	13.03	12.33	6.60	18.70	20.00	19.00	8.06	33.25	24.79	23.89	9.67	43.35
500+	12.98	13.25	6.53	16.08	24.36	25.50	14.40	32.11	32.15	34.10	16.08	44.91
Total	13.94	13.25	6.60	21.73	20.54	19.00	9.00	32.77	25.14	23.10	9.67	44.30

Table derived from final MUP91 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.
** not enough rate structures to determine value

Table 8 - 1994
Total Residential Water Prices ($/month) for Selected Volumes of Service, by Province and by Population Size Group

	10 cubic meters per month				25 cubic meters per month				35 cubic meters per month			
Province	Mean	Median	%ile 10	%ile 90	Mean	Median	%ile 10	%ile 90	Mean	Median	%ile 10	%ile 90
Newfoundland	15.36	14.00	12.50	20.00	15.37	14.00	12.50	20.00	15.37	14.00	12.50	20.00
P.E.I.	18.88	18.77	13.73	19.43	18.88	18.77	13.73	19.43	18.88	18.77	13.73	19.43
Nova Scotia	17.00	18.33	8.60	21.75	20.37	20.89	12.50	28.50	22.65	20.89	14.54	33.00
New Brunswick	22.41	20.42	16.00	33.46	26.52	24.54	17.22	40.07	28.93	24.54	17.22	43.60
Quebec	13.27	13.00	6.33	19.58	14.17	13.33	7.50	20.67	15.02	13.92	8.29	24.58
Ontario	15.96	16.28	8.20	22.50	26.97	26.23	20.50	39.55	34.41	32.20	20.97	53.20
Manitoba	17.02	17.10	15.35	17.10	35.73	36.45	34.55	36.45	48.09	49.35	47.35	49.35

Saskatchewan	17.53	18.85	12.81	25.40	30.08	31.99	22.54	38.74	39.58	43.23	28.09	48.18
Alberta	21.85	21.00	15.27	32.70	39.57	39.99	32.99	43.33	51.21	54.89	41.10	56.70
British Columbia	16.85	15.40	9.49	24.58	17.88	17.42	10.70	26.58	18.73	17.71	12.48	26.58
Yukon	37.00	38.55	**	**	37.00	38.55	**	**	37.00	38.55	**	**
North Territories	40.45	43.70	30.00	50.00	78.64	78.35	38.28	106.50	104.43	101.40	50.00	149.10
Population Size Group (000's)												
below 1 (sample)	29.47	22.50	15.50	50.00	52.97	30.47	20.52	106.50	69.61	39.27	20.57	149.10
1 to 2	20.35	18.23	9.33	33.90	25.55	21.15	9.98	40.83	29.28	22.00	10.00	51.92
2 to 5	18.50	17.05	8.17	30.50	22.10	19.13	8.33	38.28	24.78	20.00	8.33	48.53
5 to 50	17.08	15.40	8.38	29.24	22.12	19.00	9.17	38.55	25.63	21.00	9.17	47.30
50 to 500	16.02	16.73	8.20	22.46	24.56	22.54	12.09	38.55	30.52	28.70	13.90	51.20
500+	15.07	15.27	8.20	20.97	27.57	22.00	13.52	39.99	35.68	30.80	13.52	54.89
Total	16.37	16.24	8.20	25.15	24.39	22.00	11.25	39.99	29.86	28.70	12.50	53.20

Table derived from final MUP94 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.
** not enough rate structures to determine value

Table 8 - 1996
Total Residential Water Prices ($/month) for Selected Volumes of Service, by Province and by Population Size Group

	10 cubic meters per month				25 cubic meters per month				35 cubic meters per month			
Province	Mean	Median	%ile 10	%ile 90	Mean	Median	%ile 10	%ile 90	Mean	Median	%ile 10	%ile 90
Newfoundland	16.94	15.00	13.00	25.00	16.94	15.00	13.00	25.00	16.94	15.00	13.00	25.00
P.E.I.	23.03	23.00	19.00	30.00	23.67	23.00	19.00	37.00	24.16	23.00	19.00	37.00
Nova Scotia	17.95	17.00	12.00	23.00	24.42	21.00	15.00	33.00	28.90	27.00	17.00	40.00
New Brunswick	26.23	27.00	19.00	35.00	29.62	29.00	22.00	42.00	32.21	29.00	22.00	49.00
Quebec	14.46	14.00	6.00	24.00	15.38	15.00	8.00	24.00	16.28	16.00	9.00	27.00
Ontario	16.72	16.00	8.00	24.00	28.39	28.00	20.00	40.00	36.36	37.00	21.00	50.00
Manitoba	19.41	20.00	16.00	20.00	41.86	44.00	35.00	44.00	56.77	60.00	46.00	60.00
Saskatchewan	18.79	20.00	14.00	26.00	35.22	36.00	30.00	43.00	46.02	46.00	37.00	55.00
Alberta	23.58	23.00	17.00	34.00	40.90	40.00	36.00	46.00	53.06	56.00	42.00	58.00
British Columbia	19.84	20.00	10.00	31.00	21.27	22.00	14.00	31.00	22.64	22.00	15.00	32.00
Yukon	42.92	39.00	36.00	39.00	42.92	39.00	36.00	39.00	42.92	39.00	36.00	39.00
North Territories	41.53	43.00	33.00	48.00	86.47	82.00	68.00	106.00	117.01	108.00	94.00	149.00
Population Size Group (000's)												
below 1 (sample)	29.22	37.00	8.00	54.00	56.25	54.00	8.00	125.00	76.05	63.00	8.00	175.00
1 to 2	22.54	20.00	11.00	37.00	28.59	25.00	12.00	47.00	32.90	27.00	12.00	59.00
2 to 5	20.03	19.00	9.00	32.00	24.01	22.00	10.00	40.00	27.03	22.00	10.00	50.00
5 to 50	18.41	16.00	9.00	31.00	23.66	20.00	10.00	39.00	27.50	23.00	10.00	49.00
50 to 500	17.32	17.00	8.00	27.00	26.54	25.00	14.00	40.00	32.98	33.00	17.00	51.00
500+	17.02	17.00	8.00	21.00	30.23	27.00	16.00	44.00	39.10	37.00	16.00	60.00
Total	17.81	17.00	8.00	27.00	26.44	25.00	13.00	42.00	32.45	29.00	13.00	56.00

Table derived from final MUP96 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.
** not enough rate structures to determine value

Table 8 - 1999
Total Residential Water Prices ($/month) for Selected Volumes of Service, by Province and by Population Size Group

	10 cubic meters per month				25 cubic meters per month				35 cubic meters per month			
Province	Mean	Median	%ile 10	%ile 90	Mean	Median	%ile 10	%ile 90	Mean	Median	%ile 10	%ile 90
Newfoundland	18.52	16.00	14.58	25.00	18.52	16.00	14.58	25.00	18.52	16.00	14.58	25.00
P.E.I.	24.26	22.92	22.92	37.33	24.36	22.92	22.92	37.33	24.43	22.92	22.92	37.33
Nova Scotia	22.16	24.30	12.39	27.01	30.81	35.40	16.82	35.40	36.61	42.80	18.30	42.80

New Brunswick	27.33	25.34	15.80	36.67	33.02	32.67	22.84	40.50	37.19	36.67	23.33	53.85
Quebec	15.35	15.00	6.78	25.00	16.27	16.33	8.33	25.00	17.15	16.67	8.33	27.20
Ontario	17.45	16.19	7.52	25.70	29.65	28.16	18.75	40.25	37.97	37.45	23.58	50.83
Manitoba	22.09	23.25	16.31	23.25	48.16	51.60	37.01	51.60	65.52	70.50	49.39	70.50
Saskatchewan	20.55	19.68	17.10	25.51	37.43	36.38	29.05	43.36	48.39	50.67	36.75	57.04
Alberta	24.25	25.46	16.75	33.59	42.53	40.45	35.70	48.30	55.08	56.25	45.25	60.90
British Columbia	24.09	24.50	11.41	36.00	25.63	25.84	16.54	36.67	27.14	26.00	18.00	37.38
Yukon	46.50	43.50	35.75	43.50	46.50	43.50	35.75	43.50	46.50	43.50	35.75	43.50
North Territories	41.93	42.73	33.00	48.00	87.18	82.03	67.50	106.50	117.62	108.20	94.50	149.10
Population Size Group (000's)												
below 1 (sample)	22.25	19.00	8.00	37.00	26.90	22.77	8.00	54.00	30.66	24.00	8.00	62.70
1 to 2	23.84	22.00	12.50	38.70	31.41	26.00	13.00	51.58	36.86	28.83	13.32	65.66
2 to 5	22.21	20.30	10.42	36.67	26.27	23.58	11.50	43.57	29.25	24.50	11.67	51.31
5 to 50	20.10	18.00	10.00	33.00	26.06	24.00	11.25	43.36	30.41	26.67	11.50	53.20
50 to 500	19.23	17.67	7.75	30.43	28.43	28.16	14.42	42.16	34.83	33.56	17.67	54.68
500+	17.82	18.33	7.50	24.68	31.95	26.83	18.75	51.60	41.38	37.13	21.33	70.50
Total	19.34	18.15	8.33	30.27	28.56	26.98	14.08	43.81	34.95	33.56	15.25	57.36

Table derived from final MUP99 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.

Table 9 - 1991, 94, 96 and 99
Means of Total Residential Water Prices ($1999/month) for Selected Volumes of Service, by Province and by Population Size Group

	10 cubic meters per month				25 cubic meters per month				35 cubic meters per month			
Province	1991	1994	1996	1999	1991	1994	1996	1999	1991	1994	1996	1999
Newfoundland	15.73	16.71	17.76	18.52	15.88	16.72	17.76	18.52	15.98	16.72	17.76	18.52
P.E.I.	20.53	20.54	24.15	24.26	20.53	20.54	24.82	24.36	20.53	20.54	25.34	24.43
Nova Scotia	18.87	18.50	18.82	22.16	22.66	22.17	25.60	30.81	25.18	24.64	30.30	36.61
New Brunswick	26.41	24.38	27.50	27.33	29.79	28.85	31.06	33.02	32.18	31.48	33.78	37.19
Quebec	13.74	14.43	15.16	15.35	14.63	15.42	16.13	16.27	15.48	16.34	17.08	17.15
Ontario	15.27	17.36	17.53	17.45	25.45	29.34	29.77	29.65	32.39	37.43	38.13	37.97
Manitoba	15.59	18.52	20.36	22.09	32.05	38.88	43.90	48.16	42.90	52.33	59.53	65.52
Saskatchewan	19.68	19.07	19.70	20.55	33.22	32.72	36.93	37.43	43.56	43.07	48.25	48.39
Alberta	21.46	23.78	24.72	24.25	37.95	43.05	42.89	42.53	49.29	55.71	55.64	55.08
British Columbia	13.29	18.33	20.80	24.09	14.25	19.46	22.30	25.63	15.09	20.38	23.75	27.14
Yukon	30.75	40.25	45.01	46.50	30.75	40.25	45.01	46.50	30.75	40.25	45.01	46.50
North Territories	44.57	44.01	43.55	41.93	70.09	85.56	90.67	87.18	87.74	113.62	122.69	117.62
Population Size Group (000's)												
below 1 (sample)	21.09	32.06	30.64	22.25	22.71	57.63	58.98	26.90	24.02	75.74	79.74	30.66
1 to 2	20.22	22.14	23.64	23.84	24.55	27.80	29.98	31.41	27.68	31.86	34.50	36.86
2 to 5	18.93	20.13	21.01	22.21	22.17	24.04	25.18	26.27	24.69	26.96	28.34	29.25
5 to 50	17.06	18.58	19.30	20.10	21.71	24.06	24.81	26.06	25.08	27.88	28.83	30.41
50 to 500	14.69	17.43	18.16	19.23	22.54	26.73	27.83	28.43	27.94	33.20	34.59	34.83
500+	14.63	16.40	17.85	17.82	27.46	30.00	31.70	31.95	36.24	38.82	41.00	41.38
Total	15.72	17.81	18.68	19.34	23.15	26.54	27.72	28.56	28.33	32.49	34.02	34.95

Table derived from final MUP91, 94, 96 and 99 databases (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.

Table 10 - 1991
Marginal Water Prices ($/cubic meter) for Residential Customers, by Province and by Population Size Group

	25 cubic meters per month				35 cubic meters per month			
Province	Mean	Median	%ile 10	%ile 90	Mean	Median	%ile 10	%ile 90
Newfoundland	0.24	0.24	**	**	0.24	0.24	**	**
P.E.I.	***	***	***	***	***	***	***	***
Nova Scotia	0.40	0.33	0.23	0.62	0.41	0.33	0.23	0.62
New Brunswick	0.82	0.86	0.64	0.96	0.82	0.86	0.64	0.96
Quebec	0.37	0.33	0.25	0.64	0.36	0.33	0.24	0.62
Ontario	0.77	0.76	0.48	1.21	0.77	0.76	0.48	1.21
Manitoba	0.99	0.98	0.97	0.98	0.98	0.98	0.97	0.98
Saskatchewan	0.93	0.83	0.68	1.21	0.90	0.83	0.58	1.21
Alberta	1.06	1.28	0.47	1.28	1.06	1.28	0.47	1.28
British Columbia	0.34	0.22	0.17	0.86	0.31	0.22	0.17	0.86
Yukon	***	***	***	***	***	***	***	***
North Territories	2.00	2.20	0.60	2.27	2.00	2.20	0.60	2.27
Population Size Group (000's)								
below 1 (sample)	0.52	0.65	0.38	0.65	0.52	0.65	0.38	0.65
1 to 2	0.79	0.77	0.26	1.28	0.77	0.77	0.26	1.24
2 to 5	0.74	0.67	0.26	1.28	0.75	0.66	0.26	1.29
5 to 50	0.70	0.64	0.24	1.17	0.70	0.64	0.24	1.20
50 to 500	0.74	0.76	0.33	1.21	0.72	0.76	0.30	1.21
500+	0.95	0.98	0.62	1.28	0.95	0.98	0.62	1.28
Total	0.78	0.76	0.33	1.26	0.77	0.76	0.31	1.26

Table derived from final MUP91 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.
** not enough rate structures to determine value *** no rate structures apply
Due to a marginal rate of 0 resulting from a flat rate structure or high volume in minimum charge, 7,488,819 residents were not included at 25 cubic meters and 7,268,255 residents were not included at 35 cubic meters (not counting assessed).

Table 10 - 1994
Marginal Water Prices ($/cubic meter) for Residential Customers, by Province and by Population Size Group

Province	25 cubic meters per month				35 cubic meters per month			
	Mean	Median	%ile 10	%ile 90	Mean	Median	%ile 10	%ile 90
Newfoundland	0.15	0.11	**	**	0.15	0.11	**	**
P.E.I.	***	***	***	***	***	***	***	***
Nova Scotia	0.38	0.40	0.26	0.58	0.38	0.40	0.26	0.58
New Brunswick	0.84	0.92	0.55	0.92	0.83	0.92	0.51	0.92
Quebec	0.45	0.4	0.29	0.78	0.44	0.4	0.24	0.78
Ontario	0.91	0.87	0.58	1.35	0.91	0.87	0.58	1.35
Manitoba	1.27	1.29	1.28	1.29	1.26	1.29	1.28	1.29
Saskatchewan	0.96	0.96	0.56	1.41	0.95	0.96	0.51	1.41
Alberta	1.21	1.33	0.53	1.49	1.23	1.33	0.71	1.49
British Columbia	0.41	0.34	0.23	0.69	0.38	0.32	0.19	0.69
Yukon	***	***	***	***	***	***	***	***
North Territories	2.86	2.31	1.45	4.46	2.86	2.31	1.45	4.46
Population Size Group (000's)								
below 1 (sample)	2.27	1.26	0.44	5.00	2.16	1.26	0.44	5.00
1 to 2	1.05	0.82	0.30	1.87	1.03	0.77	0.30	1.87
2 to 5	0.82	0.75	0.30	1.36	0.83	0.78	0.30	1.37
5 to 50	0.80	0.77	0.29	1.28	0.79	0.74	0.27	1.28
50 to 500	0.88	0.87	0.40	1.39	0.87	0.87	0.38	1.39
500+	1.07	0.88	0.76	1.49	1.07	0.88	0.76	1.49
Total	0.92	0.88	0.40	1.41	0.91	0.88	0.40	1.41

Table derived from final MUP94 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.
** not enough rate structures to determine value *** no rate structures apply
Due to a marginal rate of 0 resulting from a flat rate structure or high volume in minimum charge, 7,769,595 residents were not included at 25 cubic meters and 7,554,904 residents were not included at 35 cubic meters (not counting assessed).

Table 10 - 1996
Marginal Water Prices ($/cubic meter) for Residential Customers, by Province and by Population Size Group

Province	25 cubic meters per month				35 cubic meters per month			
	Mean	Median	%ile 10	%ile 90	Mean	Median	%ile 10	%ile 90
Newfoundland	***	***	***	***	***	***	***	***
P.E.I.	0.64	0.64	**	**	0.64	0.64	**	**
Nova Scotia	0.58	0.61	0.35	0.8	0.58	0.61	0.35	0.8
New Brunswick	0.94	0.92	0.7	1.22	0.94	0.92	0.69	1.22
Quebec	0.47	0.42	0.32	0.75	0.45	0.42	0.27	0.73
Ontario	0.94	0.92	0.57	1.36	0.94	0.92	0.57	1.36
Manitoba	1.52	1.59	1.38	1.59	1.51	1.59	1.37	1.59
Saskatchewan	1.11	1.09	0.69	1.41	1.07	0.94	0.69	1.41
Alberta	1.24	1.26	0.54	1.58	1.26	1.26	0.72	1.58
British Columbia	0.47	0.40	0.25	0.81	0.47	0.40	0.25	0.81
Yukon	***	***	***	***	0.77	0.77	**	**
North Territories	3.10	2.62	2.60	4.26	3.10	2.62	2.60	4.26
Population Size Group (000's)								
below 1 (sample)	3.55	3.86	1.00	5.00	3.15	3.86	1.00	5.00
1 to 2	1.14	0.88	0.33	1.94	1.11	0.87	0.34	2.00
2 to 5	0.89	0.81	0.35	1.38	0.91	0.82	0.31	1.48
5 to 50	0.86	0.80	0.36	1.39	0.86	0.79	0.37	1.39
50 to 500	0.89	0.92	0.39	1.41	0.89	0.86	0.40	1.41
500+	1.18	0.93	0.79	1.59	1.18	0.93	0.79	1.59
Total	0.97	0.93	0.41	1.58	0.96	0.92	0.41	1.58

Table derived from final MUP96 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.
** not enough rate structures to determine value *** no rate structures apply
Due to a marginal rate of 0 resulting from a flat rate structure or high volume in minimum charge, 7,960,172 residents were not included at 25 cubic meters and 7,798,652 residents were not included at 35 cubic meters (not counting assessed).

Table 10 - 1999

Marginal Water Prices ($/cubic meter) for Residential Customers, by Province and by Population Size Group

	25 cubic meters per month				35 cubic meters per month			
Province	Mean	Median	%ile 10	%ile 90	Mean	Median	%ile 10	%ile 90
Newfoundland	***	***	***	***	***	***	***	***
P.E.I.	0.64	0.64	**	**	0.64	0.64	**	**
Nova Scotia	0.64	0.74	0.39	0.74	0.64	0.74	0.39	0.74
New Brunswick	0.90	0.93	0.64	1.53	0.91	0.93	0.64	1.53
Quebec	0.47	0.42	0.29	0.78	0.46	0.42	0.27	0.78
Ontario	1.00	0.97	0.61	1.37	1.00	0.95	0.62	1.37
Manitoba	1.77	1.89	1.38	1.89	1.76	1.89	1.38	1.89
Saskatchewan	1.13	1.10	0.71	1.44	1.10	1.02	0.71	1.44
Alberta	1.28	1.29	0.66	1.58	1.30	1.29	0.86	1.58
British Columbia	0.64	0.44	0.21	1.54	0.63	0.44	0.21	1.54
Yukon	***	***	***	***	0.77	0.77	**	**
North Territories	3.17	2.62	2.60	4.26	3.17	2.62	2.60	4.26
Population Size Group (000's)								
below 1 (sample)	1.58	0.74	**	**	1.47	0.74	**	**
1 to 2	1.28	0.99	0.33	2.69	1.23	0.92	0.33	2.23
2 to 5	0.97	0.91	0.35	1.52	0.98	0.91	0.35	1.57
5 to 50	0.95	0.93	0.36	1.52	0.94	0.91	0.36	1.52
50 to 500	0.94	0.93	0.42	1.52	0.93	0.87	0.42	1.52
500+	1.23	1.04	0.79	1.89	1.23	1.04	0.79	1.89
Total	1.03	0.97	0.46	1.58	1.03	0.97	0.46	1.58

Table derived from final MUP99 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.
** not enough rate structures to determine value *** no rate structures apply
Due to a marginal rate of 0 resulting from a flat rate structure or high volume in minimum charge, 8,072,093 residents were not included at 25 cubic meters and 7,917,405 residents were not included at 35 cubic meters (not counting assessed).

Table 11 - 1991
Residential Population Served with Sewer Charges, by Province and by Population Size Group

	Population Served with Sewer Charges, by % of Total Water Bill (%>0) or Charged a Flat Sewer Rate					Total pop. with sewer	Total pop. with sew.	Est. % of served that
Province	<20 %	20-40 %	>40 %	Avg. %	Flat only	charges	services	are charged
Newfoundland					147,818	147,818	323,682	45.7
P.E.I.					43,776	43,776	45,025	97.2
Nova Scotia		59,958	175,700	45.4	14,961	250,619	403,775	62.1
New Brunswick		10,000	76,624	48.4	204,530	291,154	316,326	92.0
Quebec	11,040	21,250		24.6	819,578	851,868	3,311,172	25.7
Ontario	801,757	343,257	3,179,928	44.4	1,336,702	5,661,643	7,728,297	73.3
Manitoba	65,038	44,675	625,065	49.8	7,050	741,828	755,513	98.2
Saskatchewan	39,502	210,490	273,591	41.4	69,623	593,206	602,319	98.5
Alberta	33,321	726,822	346,686	35.8	321,716	1,428,544	1,461,347	97.8
British Columbia	2,000	41,180	37,515	47.2	928,656	1,009,351	2,425,008	41.6
Yukon					15,385	15,385	17,185	89.5
North Territories		3,000	2,500	33.7		5,500	27,500	20.0
Population Size Group (000's)								
below 1 (sample)					3,610	3,610	7,025	51.4
1 to 2	7,727	22,291	21,632	36.2	173,019	224,670	330,301	68.0
2 to 5	25,239	70,683	24,347	31.4	407,600	527,869	853,387	61.9
5 to 50	153,933	384,446	679,917	40.9	1,607,421	2,825,717	5,090,188	55.5
50 to 500	135,864	368,211	3,220,773	50.2	1,152,644	4,877,492	8,047,210	60.6
500+	629,893	615,000	770,939	33.3	565,502	2,581,334	3,089,038	83.6
Total	952,657	1,460,632	4,717,608	43.4	3,909,795	11,040,692	17,417,149	63.4

Table derived from final MUP91 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.
Note that averages are weighted by population served sewers (not by population served water).

Table 11 - 1994

Residential Population Served with Sewer Charges, by Province and by Population Size Group

Province	Population Served with Sewer Charges, by % of Total Water Bill (%>0) or Charged a Flat Sewer Rate					Total pop. with sewer charges	Total pop. with sew. services	Est. % of served that are charged
	<20 %	20-40 %	>40 %	Avg. %	Flat only			
Newfoundland					187,249	187,249	333,931	56.1
P.E.I.					49,468	49,468	49,468	100.0
Nova Scotia		113,460	126,580	43.8	33,709	273,749	457,441	59.8
New Brunswick		32,532	85,978	46.3	211,199	329,708	344,813	95.6
Quebec	70,000	44,429	1447	27.0	1,059,233	1,175,109	3,496,171	33.6
Ontario	645,963	254,893	4,494,416	47.2	1,184,003	6,579,275	8,069,849	81.5
Manitoba	15,118	103,616	639,587	52.2	9,287	767,608	779,686	98.5
Saskatchewan	32,593	228,771	295,534	41.8	75,730	632,628	637,320	99.3
Alberta	24,524	752,741	514,490	38.4	303,366	1,595,121	1,618,170	98.6
British Columbia	2,000	83,000	145,634	41.6	1,487,141	1,717,775	2,655,866	64.7
Yukon		178		22.0	18,322	18,500	19,700	93.9
North Territories		18,848	2,480	33.0	1,050	22,378	41,834	53.5
Population Size Group (000's)								
below 1 (sample)			974	50.0	4,724	5,698	11,547	49.3
1 to 2	5,940	27,566	16,990	35.6	230,406	280,902	382,182	73.5
2 to 5	36,320	79,297	51,693	33.9	504,777	672,086	976,362	68.8
5 to 50	64,033	451,440	1,082,095	44.6	1,742,288	3,339,856	5,502,392	60.7
50 to 500	70,000	447,167	3,297,571	50.7	1,587,695	5,402,433	7,484,174	72.2
500+	613,905	626,999	1,856,824	40.1	549,864	3,647,592	4,147,592	87.9
Total	790,198	1,632,468	6,306,147	45.4	4,619,755	13,348,567	18,504,249	72.1

Table derived from final MUP94 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.

Note that averages are weighted by population served sewers (not by population served water).

Table 11 - 1996

Residential Population Served with Sewer Charges, by Province and by Population Size Group

Province	Population Served with Sewer Charges, by % of Total Water Bill (%>0) or Charged a Flat Sewer Rate					Total pop. with sewer charges	Total pop. with sew. services	Est. % of served that are charged
	<20 %	20-40 %	>40 %	Avg. %	Flat only			
Newfoundland					171,424	171,424	337,425	50.8
P.E.I.					54,165	54,165	54,165	100.0
Nova Scotia		53,065	192,175	56.5	35,212	280,452	449,066	62.5
New Brunswick		24,028	85,071	46.9	223,047	332,146	362,574	91.6
Quebec		30,750	74881	45.8	1,399,808	1,505,439	3,674,583	41.0
Ontario	1,645,687	383,628	4,156,178	40.0	1,295,909	7,481,401	8,532,730	87.7
Manitoba	13,883	110,289	640,408	52.4	13,005	777,585	788,129	98.7
Saskatchewan	15,622	248,988	312,709	38.8	73,402	650,721	653,211	99.6
Alberta	43,993	132,232	1,261,863	41.5	282,610	1,720,698	1,749,760	98.3
British Columbia		111,500	95,106	48.2	1,664,042	1,870,648	2,878,779	65.0
Yukon		495		29.2	23,705	24,200	24,200	100.0
North Territories		25,350	4,069	28.9	350	29,769	45,891	64.9
Population Size Group (000's)								
below 1 (sample)					1,918	1,918	8,577	22.4
1 to 2	2,590	40,422	21,053	35.0	230,062	294,127	362,477	81.1
2 to 5	28,072	82,343	66,316	34.9	542,791	719,522	986,124	73.0
5 to 50	56,546	444,710	1,073,615	44.7	2,015,650	3,590,521	5,599,443	64.1
50 to 500	433,117	552,850	3,564,398	47.0	1,846,018	6,396,383	8,177,714	78.2
500+	1,198,860		2,097,078	33.8	600,240	3,896,178	4,416,178	88.2
Total	1,719,185	1,120,325	6,822,461	41.8	5,236,678	13,778,324	19,550,513	70.5

Table derived from final MUP96 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.
Note that averages are weighted by population served sewers (not by population served water).

Table 11 - 1999
Residential Population Served with Sewer Charges, by Province and by Population Size Group

	Population Served with Sewer Charges, by % of Total Water Bill (%>0) or Charged a Flat Sewer Rate					Total pop. with sewer	Total pop. with sew.	Est. % of served that
Province	<20 %	20-40 %	>40 %	Avg. %	Flat only	charges	services	are charged
Newfoundland					180,426	180,426	335,169	53.8
P.E.I.					35,476	35,476	42,576	83.3
Nova Scotia		7,812	291,300	63.2	48,906	348,018	447,139	77.8
New Brunswick		4,750	150,860	50.7	193,201	348,811	392,502	88.9
Quebec		26,515	81232.3	46.3	1,896,617	2,004,365	4,034,679	49.7
Ontario	1,353,600	349,712	4,584,420	43.5	1,104,505	7,392,237	8,760,241	84.4
Manitoba	14,166	100,641	650,848	48.1	6,968	772,623	789,052	97.9
Saskatchewan	10,886	69,646	493,104	43.9	76,460	650,095	666,576	97.5
Alberta	16,025	604,962	949,179	41.7	365,595	1,935,761	1,925,488	100.5
British Columbia		185,750	81,819	36.6	2,064,891	2,332,460	2,998,675	77.8
Yukon		10,750		23.1	14,111	24,861	22,361	111.2
North Territories		23,250	4,500	29.6	1,600	29,350	43,945	66.8
Population Size Group (000's)								
below 1 (sample)		970		31.0	8,704	9,674	12,048	80.3
1 to 2	2,692	43,910	9,208	32.2	222,382	278,191	316,303	88.0
2 to 5	26,998	69,349	56,409	33.2	578,563	731,319	911,471	80.2
5 to 50	18,241	505,484	1,247,694	45.6	2,730,464	4,501,882	5,898,964	76.3
50 to 500	473,013	297,056	4,162,463	48.9	2,119,871	7,052,402	8,132,597	86.7
500+	873,733	467,020	1,811,489	36.1	328,773	3,481,015	5,187,019	67.1
Total	1,394,676	1,383,789	7,287,262	43.9	5,988,756	16,054,483	20,458,403	78.5

Table derived from final MUP99 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.
Note that averages are weighted by population served sewers (not by population served water).

Table 12 - 1991
Average Residential Water and Sewer Prices ($/month), by Province and by Population Size Group

Province	Mean Price* for 25 m3 Water Service	Mean Price* for 25 m3 Sewer Service	Total Price** 25 m3	Sewer % of Total
Newfoundland	11.40	2.67	14.09	19.0
P.E.I.	9.06	9.12	18.22	50.3
Nova Scotia	14.17	5.90	20.10	29.5
New Brunswick	15.82	10.35	26.43	40.2
Quebec	11.53	1.50	12.98	11.1
Ontario	14.55	8.06	22.58	35.6
Manitoba	14.22	14.20	28.44	50.0
Saskatchewan	15.63	13.84	29.47	47.0
Alberta	20.17	13.49	33.67	40.1
British Columbia	9.35	3.25	12.65	26.1
Yukon	21.46	5.82	27.28	21.3
North Territories	57.14	5.02	62.19	8.1
Population Size Group (000's)				
below 1 (sample)	16.18	4.64	20.15	19.7
1 to 2	15.36	6.76	21.78	29.5
2 to 5	13.81	6.24	19.67	29.8
5 to 50	13.50	5.84	19.26	29.9
50 to 500	12.57	7.54	20.00	37.2
500+	16.90	7.46	24.36	30.6

Total	13.71	6.95	20.54	33.3

Table derived from final MUP91 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.
* Sewer prices assume all of flat sewer charges as well as "% Sewer Charge" of other flat min./meter charges and of vol charges, are sewer charges.
** This is from the respective averages of Table 8 - 1991.

Table 12 - 1994
Average Residential Water and Sewer Prices ($/month), by Province and by Population Size Group

Province	Mean Price* for 25 m3 Water Service	Mean Price* for 25 m3 Sewer Service	Total Price** 25 m3	Sewer % of Total
Newfoundland	11.72	3.63	15.37	23.7
P.E.I.	9.13	9.77	18.88	51.6
Nova Scotia	14.36	6.15	20.37	29.5
New Brunswick	13.89	12.60	26.52	47.6
Quebec	11.98	2.30	14.17	15.5
Ontario	15.69	11.44	26.97	41.8
Manitoba	16.90	18.79	35.73	52.7
Saskatchewan	15.11	14.97	30.08	49.8
Alberta	22.70	16.92	39.57	42.6
British Columbia	11.68	6.31	17.88	34.7
Yukon	29.03	7.97	37.00	21.5
North Territories	65.65	13.01	78.64	16.5
Population Size Group (000's)				
below 1 (sample)	46.89	6.43	52.97	11.5
1 to 2	18.12	7.84	25.55	29.1
2 to 5	14.94	7.53	22.10	32.4
5 to 50	14.53	7.83	22.12	34.3
50 to 500	14.09	10.71	24.56	42.6
500+	16.82	10.74	27.57	39.0
Total	14.98	9.63	24.39	38.6

Table derived from final MUP94 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.
* Sewer prices assume all of flat sewer charges as well as "% Sewer Charge" of other flat min./meter charges and of vol charges, are sewer charges.
** This is from the respective averages of Table 8 - 1994.

Table 12 - 1996
Average Residential Water and Sewer Prices ($/month), by Province and by Population Size Group

Province	Mean Price* for 25 m3 Water Service	Mean Price* for 25 m3 Sewer Service	Total Price** 25 m3	Sewer % of Total
Newfoundland	13.21	3.77	16.94	22.0
P.E.I.	11.43	12.07	23.67	51.7
Nova Scotia	14.42	9.28	24.42	41.0
New Brunswick	14.23	14.89	29.62	52.0
Quebec	12.23	3.33	15.38	20.5
Ontario	17.57	10.88	28.39	38.1
Manitoba	19.32	22.39	41.86	53.9
Saskatchewan	19.32	15.91	35.22	45.1
Alberta	22.12	18.84	40.90	45.9
British Columbia	13.42	7.70	21.27	36.9
Yukon	31.77	11.16	42.92	26.0
North Territories	70.22	16.27	86.47	18.8
Population Size Group (000's)				
below 1 (sample)	54.49	1.86	56.25	3.1
1 to 2	19.40	9.58	28.59	32.2
2 to 5	15.70	8.58	24.01	34.6
5 to 50	15.07	8.76	23.66	36.3

50 to 500	15.47	11.27	26.54	41.7
500+	19.43	10.78	30.23	35.7
Total	16.32	10.27	26.44	38.3

Table derived from final MUP96 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.
* Sewer prices assume all of flat sewer charges as well as "% Sewer Charge" of other flat min./meter charges and of vol charges, are sewer charges.
** This is from the respective averages of Table 8 - 1996.

Table 12 - 1999
Average Residential Water and Sewer Prices ($/month), by Province and by Population Size Group

Province	Mean Price* for 25 m3 Water Service	Mean Price* for 25 m3 Sewer Service	Total Price** 25 m3	Sewer % of Total
Newfoundland	14.94	3.54	18.52	19.3
P.E.I.	12.67	13.59	24.36	48.0
Nova Scotia	15.77	13.61	30.81	48.8
New Brunswick	15.23	17.21	33.02	53.9
Quebec	12.19	4.10	16.27	25.1
Ontario	18.04	11.69	29.65	39.2
Manitoba	24.23	23.77	48.16	49.7
Saskatchewan	19.22	18.22	37.43	48.6
Alberta	23.15	19.50	42.53	45.6
British Columbia	16.22	9.43	25.63	36.7
Yukon	31.22	15.49	46.50	32.9
North Territories	71.27	16.75	87.18	18.3
Population Size Group (000's)				
below 1 (sample)	20.38	7.71	26.90	24.2
1 to 2	21.84	9.95	31.41	30.5
2 to 5	16.59	9.84	26.27	36.9
5 to 50	15.73	10.39	26.06	39.6
50 to 500	15.13	13.41	28.43	46.8
500+	22.55	9.42	31.95	29.4
Total	17.32	11.31	28.56	39.4

Table derived from final MUP99 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.
* Sewer prices assume all of flat sewer charges as well as "% Sewer Charge" of other flat min./meter charges and of vol charges, are sewer charges.
** This is from the respective averages of Table 8 - 1999.

Table 13 - 1991
Total and Residential Average Daily Flow of Water (m3), by Province and Population Size Group

	Population Size Group (000's)											
	below 2		2 to 5		5 to 50		50 to 500		500+		Canada Total	
Prov.	total	resid.	total	resid.	total	resid.	total	resid.	total	resid.	total	resident
NF	26,720	20,465	44,579	31,103	112,187	65,996	77,282	38,641			260,768	156,2
PE	2,257	1,446	3,209	2,317	14,441	4,787					19,907	8,5
NS	7,088	3,873	25,667	12,550	123,638	64,269	120,183	50,927			276,576	131,6
NB	20,983	14,783	20,497	10,342	92,875	61,509	235,922	75,927			370,277	162,5
QU	48,832	31,937	278,442	160,652	1,426,210	852,827	859,119	470,281			2,612,603	1,515,6
ON	34,235	23,560	113,701	74,948	877,279	455,660	2,440,892	1,141,175	858,213	281,560	4,324,320	1,976,9
MA	14,498	10,696	12,968	7,281	51,277	28,750			300,000	126,000	378,743	172,7
SK	16,648	12,429	24,791	16,267	80,807	43,209	218,865	88,417			341,111	160,3
AB	24,518	17,924	46,883	34,791	230,632	141,971	94,312	41,412	363,044	152,478	759,389	388,5
BC	19,281	13,937	108,623	81,960	541,479	331,759	1,181,412	721,240			1,850,795	1,148,6
YK	1,891	1,513			16,587	13,933					18,478	15,4

NTH			5,626	1,778	8,111	6,975					13,737	8,754
Total	216,951	152,563	684,986	433,989	3,575,523	2,071,646	5,227,987	2,628,019	1,521,257	560,038	11,226,704	5,846,255
MUD*	261,373		779,878		3,943,238		5,805,690		3,187,113		13,977,292	

Table derived mainly from final MUP91 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.
* These totals from MUD91, for comparison of MUD and MUP completeness (MUD has all municipalities over 1000 population).

Table 13 - 1994

Total and Residential Average Daily Flow of Water (m3), by Province and Population Size Group

	Population Size Group (000's)											
	below 2		2 to 5		5 to 50		50 to 500		500+		Canada Total	
Prov.	total	residential	total	residential	total	residential	total	residential	total	residential	total	residential
NF	32,862	25,627	41,740	29,518	126,369	79,973	89,530	67,148			290,501	202,266
PE	1,435	1,244	4,196	2,674	13,650	4,493					19,281	8,411
NS	10,143	5,337	29,886	13,174	130,897	58,994	120,750	52,335			291,676	129,840
NB	22,865	16,690	32,592	16,661	84,838	56,472	248,562	40,869			388,857	130,692
QU	58,501	40,510	288,335	164,948	1,435,817	917,302	824,842	493,176			2,607,495	1,615,936
ON	37,279	25,948	117,237	80,147	910,592	496,488	2,175,535	1,057,835	1,126,792	473,773	4,367,435	2,134,191
MA	11,351	7,946	13,851	8,586	57,648	35,184			300,000	162,000	382,850	213,716
SK	22,092	16,285	24,292	15,859	78,091	45,853	180,000	75,800			304,475	153,797
AB	25,435	18,168	50,290	34,188	233,646	134,237	98,500	42,728	384,000	165,438	791,871	394,759
BC	20,659	14,769	110,209	80,746	584,383	403,161	854,607	575,039	340,950	204,571	1,910,808	1,278,286
YK	2,818	1,809			14,680	6,461					17,498	8,270
NTH	2,225	1,731	5,309	4,005	8,000	3,040					15,534	8,776
Total	247,665	176,064	717,937	450,506	3,678,611	2,241,658	4,592,326	2,404,930	2,151,742	1,005,782	11,388,281	6,278,940
MUD*	263,862		773,611		3,956,053		5,113,174		3,718,742		13,825,442	

Table derived mainly from final MUP94 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.
* These totals from MUD94, for comparison of MUD and MUP completeness (MUD has all municipalities over 1000 population).

Table 13 - 1996

Total and Residential Average Daily Flow of Water (m3), by Province and Population Size Group

	Population Size Group (000's)											
	below 2		2 to 5		5 to 50		50 to 500		500+		Canada Total	
Prov.	total	residential	total	residential	total	residential	total	residential	total	residential	total	residential
NF	23,932	19,514	54,121	37,905	132,104	78,748	91,725	68,795			301,882	204,962
PE	624	451	1,592	1,512	21,210	7,594					23,426	9,557
NS	6,452	3,187	26,449	13,931	48,390	20,504	204,906	93,940			286,197	131,562
NB	20,494	13,314	32,055	18,528	98,194	62,784	255,662	48,666			406,405	143,292
QU	49,065	31,577	270,520	162,774	1,520,496	961,553	784,130	409,510			2,624,211	1,565,414
ON	42,669	29,859	117,837	85,083	886,201	488,172	2,452,199	1,188,988	1,369,100	577,332	4,868,005	2,369,434
MA	15,213	10,460	11,378	6,985	57,783	34,751			257,000	138,780	341,374	190,976
SK	17,788	13,662	27,035	18,885	70,868	38,698	172,450	78,322			288,141	149,567

AB	23,882	18,110	53,574	35,889	259,665	147,458	86,000	42,870	425,240	191,774	848,361	436,1(
BC	25,386	18,396	79,072	57,939	608,697	428,658	946,573	668,167	333,676	193,532	1,993,404	1,366,6(
YK	5,935	4,521			15,888	6,355					21,823	10,8(
NTH	2,360	1,844	5,163	3,254	6,900	2,829					14,423	7,9(
Total	233,800	164,895	678,796	442,685	3,726,396	2,278,104	4,993,645	2,599,257	2,385,016	1,101,418	12,017,652	6,586,3(
MUD*	240,674		706,590		3,905,880		5,490,462		3,905,679		14,249,285	

Table derived mainly from final MUP96 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.
* These totals from MUD96, for comparison of MUD and MUP completeness (MUD has all municipalities over 1000 population).

Table 13 - 1999
Total and Residential Average Daily Flow of Water (m3), by Province and Population Size Group

	Population Size Group (000's)											
	below 2		2 to 5		5 to 50		50 to 500		500+		Canada Total	
Prov.	total	residentia l	total	residential	total	residential	total	residential	total	residential	total	residenti
NF	29,144	22,812	59,618	40,478	142,137	82,646	93,109	69,832			324,008	215,7(
PE	803	640	796	756	16,823	4,761					18,422	6,1(
NS	6,771	2,863	25,664	13,943	55,766	27,026	201,905	90,367			290,106	134,1(
NB	23,895	14,819	29,875	16,965	95,804	65,109	73,028	56,891			222,602	153,7(
QU	46,646	30,872	285,954	171,477	1,565,902	988,471	877,716	471,072			2,776,218	1,661,8(
ON	18,242	12,128	77,104	57,433	973,007	552,339	2,229,289	1,125,202	1,634,473	863,087	4,932,115	2,610,1(
MA	14,169	10,207	12,172	7,162	59,248	32,535			250,000	117,500	335,589	167,4(
SK	19,960	14,477	23,635	16,346	71,355	37,547	195,700	88,194			310,650	156,5(
AB	25,484	18,510	50,630	34,242	291,468	173,578	94,129	45,989	527,012	282,323	988,723	554,6(
BC	25,150	18,017	99,847	77,891	610,307	434,008	1,083,240	685,323	360,000	198,000	2,178,544	1,413,2(
YK	2,227	1,624	3,000	2,700	15,500	10,385					20,727	14,7(
NTH	2,460	1,875	5,113	2,740	7,000	2,829					14,573	7,4(
Total	214,951	148,844	673,408	442,133	3,904,316	2,411,234	4,848,115	2,632,870	2,771,485	1,460,910	12,412,276	7,095,9(
MUD*	219,280		683,818		4,120,478		5,512,882		4,292,474		14,828,932	

Table derived mainly from final MUP99 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.
* These totals from MUD99, for comparison of MUD and MUP completeness (MUD has all municipalities over 1000 population).

Table 14 - 1991
Residential Flat versus Volume-based Average Daily Flows, by Province and by Population Size Group

	Total for All Rate Types Flow (cubic metres)		Population Served*	Domestic ADF, litres	Residential Flow (m3)	Population Served*	Dom. FLAT ADF, litres	Residential flow (m3)	Population Served*	Dom. VOL. ADF, litres
Province	total ADF	Res. ADF	Water	per Capita	FLAT only	FLAT only	per Capita	VOL. only	VOL. only	per Capita
Newfoundland	260,768	156,205	344,403	453.6	145,526	320,303	454.3	5,092	12,500	407.(
P.E.I.	19,907	8,550	35,849	238.5	8,550	35,849	238.5			
Nova Scotia	276,576	131,618	399,011	329.9	12,688	33,090	383.4	75,807	254857	297.(
New Brunswick	370,277	162,561	322,259	304.4	58,478	147,782	395.7	10,367	31,000	334.(
Quebec	2,612,603	1,515,698	3,337,861	454.1	1,205,250	2,556,613	471.4	238,125	596,586	399.(
Ontario	4,324,320	1,976,903	7,590,266	260.5	196,674	502,409	391.5	976,129	4,168,589	234.(
Manitoba	378,743	172,728	755,051	228.8	6,823	8,238	828.3	159,534	731,399	218.(
Saskatchewan	341,111	160,322	598,387	267.9	1,154	3,259	354.0	151,898	570,510	266.(

Alberta	759,389	388,576	1,478,089	262.9	21,943	49,799	440.6	286,040	1,154,368	247.8
British Columbia	1,850,795	1,148,896	2,466,448	465.8	553,134	1,173,069	471.5	160,063	427,484	374.4
Yukon	18,478	15,446	17,300	892.8	15,446	17,300	892.8			
North Territories	13,737	8,754	24,800	353.0				74	3,000	24.5
Population Size Group (000's)										
below 2	216,951	152,563	354,331	430.6	109,748	218,553	502.2	29,646	100,185	295.9
2 to 5	684,986	433,989	897,110	483.8	308,267	581,242	530.4	68,345	203,054	336.6
5 to 50	3,575,523	2,071,646	5,009,156	413.6	1,101,429	2,304,391	478.0	512,737	1,540,521	332.8
50 to 500	5,227,987	2,628,019	8,018,872	327.7	706,222	1,743,525	405.1	1,043,747	3,813,829	273.7
500+	1,521,257	560,038	3,090,255	181.2				408,651	2,292,704	178.2
Total	11,226,704	5,846,255	17,369,724	336.6	2,225,666	4,847,711	459.1	2,063,127	7,950,293	259.5

Table derived from final MUP91 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.
* Population Served is determined to be population for which a domestic flow above zero is indicated.

Table 14 - 1994

Residential Flat versus Volume-based Average Daily Flows, by Province and by Population Size Group

	Total for All Rate Types Flow (cubic metres)		Population Served*	Domestic ADF, litres	Residential Flow (m3)	Population Served*	Dom. FLAT ADF, litres	Residential flow (m3)	Population Served*	Dom. VOL. ADF, litres
Province	total ADF	Res. ADF	Water	per Capita	FLAT only	FLAT only	per Capita	VOL. only	VOL. only	per Capita
Newfoundland	290,501	202,266	353,245	572.6	198,666	345,245	575.4			
P.E.I.	19,281	8,411	37,807	222.5	8,411	37,807	222.5			
Nova Scotia	291,676	129,840	425,816	304.9	13,749	32,846	418.6	93,903	299141	313.9
New Brunswick	388,857	130,692	340,612	383.7	43,690	83,893	520.8	8,396	26,854	312.7
Quebec	2,607,495	1,615,936	3,745,710	431.4	1,190,409	2,680,524	444.1	260,078	590,684	440.3
Ontario	4,367,435	2,134,191	8,194,145	260.5	219,048	532,073	411.7	1,067,847	4,634,462	230.4
Manitoba	382,850	213,716	774,641	275.9	6,682	7,291	916.5	200,706	753,012	266.5
Saskatchewan	304,475	153,797	636,049	241.8	2,628	7,704	341.1	147,361	613,910	240.0
Alberta	791,871	394,759	1,635,063	241.4	19,183	44,348	432.6	282,751	1,227,283	230.4
British Columbia	1,910,808	1,278,286	2,784,757	459.0	472,610	939,445	503.1	195,719	496,456	394.2
Yukon	17,498	8,270	19,700	419.8	1,809	1,900	952.1			
North Territories	15,534	8,776	41,884	209.5				3,096	19,999	154.8
Population Size Group (000's)										
below 2	247,665	176,064	420,314	418.9	121,564	251,831	482.7	40,375	137,068	294.6
2 to 5	717,937	450,506	1,025,567	439.3	318,351	632,960	503.0	89,287	277,768	321.4
5 to 50	3,678,611	2,241,658	5,631,147	398.1	1,149,666	2,414,917	476.1	634,930	1,988,604	319.3
50 to 500	4,592,326	2,404,930	7,727,221	311.2	587,304	1,413,368	415.5	1,046,805	3,943,678	265.4
500+	2,151,742	1,005,782	4,185,180	240.3				448,460	2,314,703	193.7
Total	11,388,281	6,278,940	18,989,429	330.7	2,176,885	4,713,076	461.9	2,259,857	8,661,821	260.9

Table derived from final MUP94 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.
* Population Served is determined to be population for which a domestic flow above zero is indicated.

Table 14 - 1996

Residential Flat versus Volume-based Average Daily Flows, by Province and by Population Size Group

	Total for All Rate Types Flow (cubic metres)		Population Served*	Domestic ADF, litres	Residential Flow (m3)	Population Served*	Dom. FLAT ADF, litres	Residential flow (m3)	Population Served*	Dom. VOL. ADF, litres
Province	total ADF	Res. ADF	Water	per Capita	FLAT only	FLAT only	per Capita	VOL. only	VOL. only	per Capita
Newfoundland	301,882	204,962	362,174	565.9	198,400	354,907	559.0			
P.E.I.	23,426	9,557	51,033	187.3	8,801	47,433	185.5	756	3600	210.0
Nova Scotia	286,197	131,562	489,408	268.8	7,405	18,179	407.3	10,541	30278	348.1
New Brunswick	406,405	143,292	345,221	415.1	44,286	95,595	463.3	5,037	24,231	207.9
Quebec	2,624,211	1,565,414	3,996,258	391.7	1,084,065	2,604,684	416.2	271,963	785,759	346.1

Ontario	4,868,005	2,369,434	8,779,509	269.9	212,171	510,161	415.9	1,179,224	4,926,829	239.3
Manitoba	341,374	190,976	790,660	241.5	5,101	5,694	895.9	178,968	768,336	232.9
Saskatchewan	288,141	149,567	652,951	229.1	3,529	7,753	455.2	142,401	632,429	225.2
Alberta	848,361	436,101	1,760,334	247.7	22,581	44,323	509.5	273,927	1,257,206	217.9
British Columbia	1,993,404	1,366,692	3,105,646	440.1	450,699	920,494	489.6	180,846	487,692	370.8
Yukon	21,823	10,876	24,200	449.4	3,991	3,700	1078.6			
North Territories	14,423	7,927	45,941	172.5				6427	39441	163.0
Population Size Group (000's)										
below 2	233,800	164,895	396,884	415.5	114,126	230,117	495.9	41,097	141,910	289.6
2 to 5	678,796	442,685	1,032,475	428.8	309,400	628,614	492.2	90,151	281,785	319.9
5 to 50	3,726,396	2,278,104	5,914,640	385.2	1,193,755	2,651,430	450.2	634,202	2,135,489	297.0
50 to 500	4,993,645	2,599,257	8,598,776	302.3	423,748	1,102,762	384.3	1,019,148	3,999,013	254.8
500+	2,385,016	1,101,418	4,460,560	246.9				465,492	2,397,604	194.1
Total	12,017,652	6,586,360	20,403,335	322.8	2,041,029	4,612,923	442.5	2,250,090	8,955,801	251.2

Table derived from final MUP96 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.
* Population Served is determined to be population for which a domestic flow above zero is indicated.

Table 14 - 1999
Residential Flat versus Volume-based Average Daily Flows, by Province and by Population Size Group

	Total for All Rate Types Flow (cubic metres)		Population Served*	Domestic ADF, litres	Residential Flow (m3)	Population Served*	Dom. FLAT ADF, litres	Residential flow (m3)	Population Served*	Dom. VOL. ADF, litres
Province	total ADF	Res. ADF	Water	per Capita	FLAT only	FLAT only	per Capita	VOL. only	VOL. only	per Capita
Newfoundland	324,008	215,768	357,661	603.3	211,882	352,661	600.8			
P.E.I.	18,422	6,157	35,476	173.6	5,401	31,876	169.4			
Nova Scotia	290,106	134,199	487,936	275.0	7,330	17,700	414.1	86,972	336587	258.4
New Brunswick	222,602	153,784	357,774	429.8	42,274	97,415	434.0	13,606	35,523	383.0
Quebec	2,776,218	1,661,892	4,142,029	401.2	1,155,683	2,647,216	436.6	278,110	797,648	348.7
Ontario	4,932,115	2,610,189	9,026,653	289.2	216,260	505,512	427.8	1,024,042	4,025,888	254.4
Manitoba	335,589	167,404	780,602	214.5	4,180	3,939	1061.2	157,367	765,884	205.5
Saskatchewan	310,650	156,564	666,685	234.8	3,057	6,185	494.3	149,764	648,559	230.9
Alberta	988,723	554,642	1,946,274	285.0	20,885	40,980	509.6	355,712	1,377,991	258.1
British Columbia	2,178,544	1,413,239	3,217,806	439.2	514,394	978,364	525.8	220,007	479,462	458.9
Yukon	20,727	14,709	24,861	591.6	3,750	3,361	1115.7			
North Territories	14,573	7,444	46,267	160.9				5454	37267	146.3
Population Size Group (000's)										
below 2	214,951	148,844	352,201	422.6	101,082	192,286	525.7	41,616	144,163	288.7
2 to 5	673,408	442,133	951,918	464.5	322,204	600,938	536.2	83,095	245,624	338.3
5 to 50	3,904,316	2,411,234	6,142,890	392.5	1,284,970	2,728,371	471.0	707,335	2,334,314	303.0
50 to 500	4,848,115	2,632,870	8,411,106	313.0	476,840	1,163,614	409.8	1,217,648	4,524,708	269.1
500+	2,771,485	1,460,910	5,231,909	279.2				241,340	1,256,000	192.1
Total	12,412,276	7,095,990	21,090,024	336.5	2,185,096	4,685,209	466.4	2,291,034	8,504,809	269.4

Table derived from final MUP99 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.
* Population Served is determined to be population for which a domestic flow above zero is indicated.

Table 15 - 1991
Total Commercial Water Prices ($/month) for Selected Volumes of Service, by Province and by Population Size Group

	10 cubic meters per month				35 cubic meters per month				100 cubic meters per month			
Province	Mean	Median	%ile 10	%ile 90	Mean	Median	%ile 10	%ile 90	Mean	Median	%ile 10	%ile 90
Newfoundland	18.16	16.00	9.61	29.10	18.89	16.80	10.00	29.10	20.94	18.00	11.01	32.40
P.E.I.	25.32	30.71	8.99	36.60	28.53	34.50	8.99	40.01	38.98	34.50	11.24	63.41
Nova Scotia	26.93	26.13	14.13	42.50	34.20	32.50	20.28	50.54	51.77	52.40	28.17	72.56

New Brunswick	26.50	23.29	8.24	48.91	31.29	25.42	12.35	62.37	44.30	28.75	12.35	95.98
Quebec	14.93	13.00	5.96	26.25	17.55	15.33	8.04	30.45	26.43	22.17	9.14	50.37
Ontario	23.09	20.00	8.56	40.60	35.62	32.05	16.45	55.90	71.34	67.91	19.93	128.80
Manitoba	24.37	20.12	13.89	42.84	41.39	37.77	20.04	77.87	102.09	96.09	47.14	170.35
Saskatchewan	20.95	19.92	13.80	32.58	38.38	37.92	26.21	51.45	88.92	89.00	53.26	121.00
Alberta	28.57	25.15	13.92	45.32	46.74	45.82	23.25	71.58	99.32	100.30	34.00	159.90
British Columbia	17.92	14.66	6.75	34.55	21.39	17.70	8.00	39.08	33.46	28.20	8.33	64.50
Yukon	20.99	20.99	**	**	32.74	32.74	**	**	50.29	50.29	**	**
North Territories	47.95	50.00	34.20	59.60	90.89	79.74	44.28	183.60	221.21	218.50	50.00	506.00
Population Size Group (000's)												
below 1 (sample)	26.35	22.92	3.20	96.82	30.20	22.92	7.50	96.82	41.17	27.67	7.50	96.82
1 to 2	20.96	19.00	8.75	35.00	28.48	25.10	10.45	50.60	51.69	34.01	11.19	117.10
2 to 5	20.23	17.05	8.00	36.00	26.72	23.00	10.42	48.90	46.39	30.50	10.92	104.00
5 to 50	20.65	17.76	7.71	37.92	29.66	25.92	9.75	54.89	56.23	44.78	12.25	117.20
50 to 500	18.87	14.72	6.67	36.89	30.38	28.37	10.39	54.89	62.09	56.32	19.05	128.50
500+	15.24	13.34	6.53	36.76	35.55	34.10	13.34	67.26	88.89	90.00	13.34	146.50
Total	20.48	17.66	8.00	36.89	28.65	24.97	10.09	51.30	52.94	39.10	11.67	115.50

Table derived from final MUP91 database (for responding municipalities with rate structures), Environmental Economics Branch, Environment Canada.
Note: all values based on unweighted rate schedules.
** not enough rate structures to determine value

Table 15 - 1994
Total Commercial Water Prices ($/month) for Selected Volumes of Service, by Province and by Population Size Group

	10 cubic meters per month				35 cubic meters per month				100 cubic meters per month			
Province	Mean	Median	%ile 10	%ile 90	Mean	Median	%ile 10	%ile 90	Mean	Median	%ile 10	%ile 90
Newfoundland	19.74	18.00	10.46	28.17	20.35	18.33	10.75	29.17	21.86	19.94	12.75	32.54
P.E.I.	28.23	32.06	13.12	42.29	32.38	38.96	13.12	49.37	48.07	39.17	16.87	97.11
Nova Scotia	27.36	25.51	14.02	38.42	34.70	32.73	18.60	50.17	53.16	52.40	24.13	79.60
New Brunswick	26.86	23.50	9.87	46.02	31.60	28.67	12.05	54.86	44.92	33.12	12.05	103.49
Quebec	15.70	13.42	6.40	28.83	18.55	16.35	8.33	31.50	27.96	22.49	9.17	55.45
Ontario	25.62	23.52	9.77	43.49	40.23	38.48	17.14	60.90	81.53	83.59	24.29	138.13
Manitoba	27.72	22.47	14.15	51.23	45.33	42.12	20.25	86.16	112.59	100.76	50.53	193.50
Saskatchewan	22.37	20.00	14.67	33.97	40.31	39.26	24.74	54.56	93.49	92.44	53.04	132.11
Alberta	30.81	26.63	15.96	47.25	50.66	49.53	25.10	74.85	109.64	111.80	37.07	173.30
British Columbia	20.66	17.46	8.33	35.75	24.58	21.63	9.63	43.90	37.86	32.82	10.35	78.91
Yukon	28.45	27.00	**	**	28.45	27.00	**	**	48.58	27.00	**	**
North Territories	45.41	44.05	34.20	59.60	129.61	134.20	50.00	183.60	355.66	383.50	83.28	506.00
Population Size Group (000's)												
below 1 (sample)	34.35	29.75	13.13	73.73	68.91	43.30	16.04	162.05	165.98	85.57	16.04	463.00
1 to 2	22.96	20.00	9.56	39.45	32.94	26.95	10.95	56.94	61.56	35.69	11.67	126.83
2 to 5	21.51	18.87	8.33	36.89	28.81	24.07	10.98	51.39	51.09	32.84	11.75	117.80
5 to 50	22.31	19.83	8.33	39.25	32.03	28.06	10.98	59.50	61.54	47.66	12.50	131.00
50 to 500	22.42	20.50	8.30	39.40	35.31	34.03	13.00	59.50	71.58	62.10	20.58	135.90
500+	17.43	16.81	8.80	44.04	38.84	34.65	16.33	80.48	99.40	90.00	16.33	175.20
Total	22.30	19.85	8.42	39.15	31.84	26.82	11.00	56.62	60.22	41.79	12.29	128.00

Table derived from final MUP94 database (for responding municipalities with rate structures), Environmental Economics Branch, Environment Canada.
Note: all values based on unweighted rate schedules.
** not enough rate structures to determine value

Table 15 - 1996
Total Commercial Water Prices ($/month) for Selected Volumes of Service, by Province and by Population Size Group

10 cubic meters per month	35 cubic meters per month	100 cubic meters per month

Province	Mean	Median	%ile 10	%ile 90	Mean	Median	%ile 10	%ile 90	Mean	Median	%ile 10	%ile 90
Newfoundland	23.69	21.00	13.00	35.00	24.20	21.00	13.00	35.00	25.93	22.00	15.00	40.00
P.E.I.	26.83	30.00	14.00	34.00	32.00	34.00	14.00	50.00	46.67	34.00	14.00	91.00
Nova Scotia	28.65	26.00	16.00	42.00	37.25	33.00	22.00	56.00	58.79	54.50	27.00	92.00
New Brunswick	26.64	24.00	12.00	39.00	32.83	30.00	15.00	54.00	51.00	32.00	15.00	126.00
Quebec	17.06	15.00	7.00	30.50	19.81	18.00	9.00	34.00	29.01	24.00	10.00	55.50
Ontario	27.22	24.00	11.00	48.00	42.01	41.00	18.70	66.60	84.36	87.00	23.70	141.00
Manitoba	28.13	22.50	16.00	50.50	46.43	44.50	23.10	85.50	116.20	109.00	61.60	193.50
Saskatchewan	24.23	22.00	15.00	37.00	42.89	42.00	28.00	59.00	98.08	94.50	53.00	144.00
Alberta	32.18	28.00	16.00	49.00	54.01	53.00	28.00	82.00	117.54	121.00	39.00	184.00
British Columbia	24.13	20.00	10.00	41.30	28.95	24.00	12.00	51.30	44.75	34.00	14.00	91.30
Yukon	34.60	27.00	26.00	54.00	34.60	27.00	26.00	54.00	56.60	54.00	26.00	99.00
North Territories	51.69	44.50	33.00	82.00	146.56	151.50	72.00	250.00	397.19	433.00	145.00	685.00
Population Size Group (000's)												
below 1 (sample)	35.13	29.50	5.00	97.00	78.00	66.50	5.00	175.00	200.00	131.00	5.00	500.00
1 to 2	25.42	22.00	10.00	44.00	35.78	29.00	12.00	66.00	65.85	38.00	13.00	148.00
2 to 5	23.84	21.00	10.00	39.00	31.67	26.00	13.00	54.00	55.85	36.00	13.00	123.00
5 to 50	23.47	20.00	9.00	41.00	33.66	29.00	12.00	60.30	64.29	49.00	15.00	137.00
50 to 500	24.85	22.00	9.00	43.00	38.39	35.00	14.00	61.00	76.56	75.00	23.00	133.00
500+	18.89	18.00	9.00	49.00	43.00	37.00	18.00	90.00	106.67	97.00	18.00	196.00
Total	24.14	21.00	9.00	42.00	34.23	29.00	12.00	60.00	64.22	44.00	14.00	134.00

Table derived from final MUP96 database (for responding municipalities with rate structures), Environmental Economics Branch, Environment Canada.
Note: all values based on unweighted rate schedules.

Table 15 - 1999
Total Commercial Water Prices ($/month) for Selected Volumes of Service, by Province and by Population Size Group

	10 cubic meters per month				35 cubic meters per month				100 cubic meters per month			
Province	Mean	Median	%ile 10	%ile 90	Mean	Median	%ile 10	%ile 90	Mean	Median	%ile 10	%ile 90
Newfoundland	23.94	22.33	14.50	34.00	24.63	24.00	14.50	34.30	26.89	24.00	15.83	38.00
P.E.I.	27.28	28.94	13.73	34.38	32.49	34.01	13.73	49.73	46.03	39.21	13.73	91.33
Nova Scotia	29.71	27.31	17.33	43.75	39.59	35.01	22.75	63.45	64.06	57.40	28.17	109.70
New Brunswick	28.24	27.04	14.61	46.00	35.36	31.59	19.17	57.00	56.85	32.54	19.17	135.70
Quebec	18.84	16.67	7.50	33.87	21.62	19.49	10.00	36.75	31.19	25.67	11.50	57.61
Ontario	28.70	26.04	12.65	49.32	44.80	42.98	20.01	73.30	90.98	90.00	28.10	148.85
Manitoba	30.18	25.04	16.00	53.66	49.01	46.24	26.10	90.86	121.29	115.55	68.11	192.70
Saskatchewan	25.68	24.82	17.75	36.82	46.09	45.37	30.24	66.08	104.79	105.45	56.45	163.30
Alberta	35.48	32.35	17.40	57.88	58.25	59.13	35.25	81.50	128.17	130.20	57.77	195.20
British Columbia	27.67	24.91	11.94	44.49	33.60	28.03	15.13	57.62	53.18	39.88	17.68	112.85
Yukon	29.97	27.81	25.00	43.50	29.97	27.81	25.00	43.50	53.72	27.81	25.00	112.20
North Territories	51.14	44.10	33.00	82.00	146.62	149.10	72.00	249.50	398.79	426.00	145.00	685.00
Population Size Group (000's)												
below 1 (sample)	31.07	22.00	14.50	56.20	39.25	27.70	14.50	97.45	69.05	29.00	15.00	161.40
1 to 2	26.78	24.15	11.62	44.31	39.33	30.58	13.33	71.32	75.90	40.06	14.50	161.96
2 to 5	26.03	23.28	11.23	43.93	33.80	28.48	12.81	59.73	58.05	34.79	13.48	130.19
5 to 50	25.38	22.76	10.23	43.29	36.07	32.12	13.93	65.00	68.86	53.07	16.86	143.00
50 to 500	25.96	24.25	8.21	46.12	41.42	41.18	14.54	68.96	84.70	83.35	24.09	138.92
500+	21.74	18.19	9.75	46.78	44.28	38.77	20.63	79.61	108.57	103.20	34.93	191.50
Total	25.90	23.23	10.50	44.14	36.62	31.27	13.59	65.03	68.93	48.04	15.21	141.80

Table derived from final MUP99 database (for responding municipalities with rate structures), Environmental Economics Branch, Environment Canada.
Note: all values based on unweighted rate schedules.

Table 16 - 1991
Total Commercial Water Flows, by Province and by Population Size Group

Province	Responding Municipal Population Total	Total Avg. Daily Flow (m3)	Average Daily Flow per Capita (litres)
Newfoundland	355,806	38,715	108.8
PEI	35,334	4,895	138.5
Nova Scotia	431,152	57,772	134.0
New Brunswick	357,442	80,441	225.0
Quebec	5,462,836	541,023	99.0
Ontario	8,322,433	1,009,231	121.3
Manitoba	801,420	78,240	97.6
Saskatchewan	617,523	90,549	146.6
Alberta	2,164,075	293,058	135.4
British Columbia	2,663,267	354,413	133.1
Yukon	21,800	3,032	139.1
North Terr.	28,227	3,236	114.6
Population Size Group (000's)			
below 1 (sample)	8,446	1,239	146.7
1 to 2	413,528	37,857	91.5
2 to 5	1,145,867	122,353	106.8
5 to 50	5,978,881	528,040	88.3
50 to 500	9,049,283	1,154,427	127.6
500+	4,665,310	710,689	152.3
Total	21,261,315	2,554,605	120.2

Table derived from MUD91 database, Environmental Economics Branch, Environment Canada.

Table 16 - 1994
Total Commercial Water Flows, by Province and by Population Size Group

Province	Responding Municipal Population Total	Total Avg. Daily Flow (m3)	Average Daily Flow per Capita (litres)
Newfoundland	383,525	36,191	94.4
PEI	36,442	6,704	184.0
Nova Scotia	424,881	67,613	159.1
New Brunswick	374,367	56,950	152.1
Quebec	5,695,510	549,394	96.5
Ontario	8,961,682	997,331	111.3
Manitoba	810,918	64,446	79.5
Saskatchewan	634,435	69,392	109.4
Alberta	2,197,725	225,937	102.8
British Columbia	3,039,793	338,574	111.4
Yukon	26,400	5,228	198.0
North Terr.	37,999	2,509	66.0
Population Size Group (000's)			
below 1 (sample)	9,431	521	55.2
1 to 2	430,925	40,516	94.0
2 to 5	1,190,241	123,228	103.5
5 to 50	6,600,976	567,899	86.0
50 to 500	8,723,208	958,447	109.9
500+	5,668,896	729,658	128.7
Total	22,623,677	2,420,269	107.0

Table derived from MUD94 database, Environmental Economics Branch, Environment Canada.

Table 16 - 1996
Total Commercial Water Flows, by Province and by Population Size Group

Province	Responding Municipal Population Total	Total Avg. Daily Flow (m3)	Average Daily Flow per Capita (litres)
Newfoundland	385,645	40,471	104.9
PEI	53,481	8,169	152.7
Nova Scotia	627,975	65,671	104.6
New Brunswick	375,099	59,058	157.4
Quebec	5,990,201	658,473	109.9
Ontario	9,444,247	1,173,547	124.3
Manitoba	833,008	67,496	81.0
Saskatchewan	653,138	74,109	113.5
Alberta	2,242,120	238,722	106.5
British Columbia	3,332,666	341,448	102.5
Yukon	28,900	4,301	148.8
North Terr.	42,056	3,625	86.2
Population Size Group (000's)			
below 1 (sample)	5,807	436	75.1
1 to 2	394,185	37,462	95.0
2 to 5	1,138,387	113,151	99.4
5 to 50	6,933,695	597,690	86.2
50 to 500	9,647,192	1,128,081	116.9
500+	5,895,737	859,600	145.8
Total	24,015,003	2,736,420	113.9

Table derived from MUD96 database, Environmental Economics Branch, Environment Canada.

Table 16 - 1999
Total Commercial Water Flows, by Province and by Population Size Group

Province	Responding Municipal Population Total	Total Daily Flow (m3)	Average Daily Flow per Capita (litres)
Newfoundland	382,431	43,470	113.7
PEI	56,018	10,602	189.3
Nova Scotia	604,742	52,922	87.5
New Brunswick	379,986	57,512	151.4
Quebec	6,000,366	670,592	111.8
Ontario	9,883,113	1,170,298	118.4
Manitoba	830,802	82,075	98.8
Saskatchewan	674,043	73,329	108.8
Alberta	2,361,348	261,069	110.6
British Columbia	3,515,604	411,810	117.1
Yukon	27,861	3,808	136.7
North Terr.	43,390	3,541	81.6
Population Size Group (000's)			
below 1 (sample)	13,577	851	62.7
1 to 2	337,929	31,581	93.5
2 to 5	1,047,842	101,772	97.1
5 to 50	7,327,035	645,660	88.1
50 to 500	9,248,337	1,087,613	117.6
500+	6,618,112	968,091	146.3
Total	24,592,832	2,835,568	115.3

Table derived from MUD99 database, Environmental Economics Branch, Environment Canada.

Table 17 - 1991
Frequency Distribution of Residential and Commercial Water Rate Types, by Province and by Population Size Group

	Flat Charge Types		Volume-Based Rate Types										Total	Total	Total
	Flat		Assessment		CUC		DBR		IBR		Complex		Res.	Com.	Rates or
Province	Res.	Com.	Res.	Com.	Res.	Com.	Res.	Com.	Res.	Com.	Res.	Com.	Rates	Rates	Assess.
Newfoundland	75	60	1	1	2	8	1	5					78	73	153
P.E.I.	11	3				8							11	11	22
Nova Scotia	25	6			1	2	37	41					63	49	112
New Brunswick	42	25			3	7	8	11	1	1			54	44	98
Quebec	314	218	29	31	56	148	1	28	4	7		2	375	403	838
Ontario	182	79	8	2	116	126	72	112	14	12	1	3	385	332	727
Manitoba	10	2	1	1	6	6	23	24					39	32	73
Saskatchewan	16	1			39	36	14	19	8	8	1	1	78	65	143
Alberta	37	16	1		63	60	30	35	8	10		4	138	125	264
British Columbia	107	71	1	1	19	35	16	47	4	7	1	5	147	165	314
Yukon	2	1				1							2	2	4
North Territories	3	1			5	5							8	6	14
Population Size Group (000's)															
below 1 (sample)	9	5	1	1	2	2		1					11	8	21
1 to 2	194	127	1	4	61	87	34	48	4	4	1	3	294	269	568
2 to 5	267	191	14	14	61	97	44	75	11	13		1	383	377	788
5 to 50	314	149	16	11	149	212	102	166	22	26		5	587	558	1172
50 to 500	39	10	7	5	34	42	19	28	2	2	2	6	96	88	196
500+	1	1	2	1	3	2	3	4					7	7	17
Total	824	483	41	36	310	442	202	322	39	45	3	15	1378	1,307	2762

Table derived from final MUP91 database (for responding municipalities with rate types or assessments), Environmental Economics Branch, Environment Canada.

Table 17 - 1994
Frequency Distribution of Residential and Commercial Water Rate Types, by Province and by Population Size Group

	Flat Charge Types		Volume-Based Rate Types										Total	Total	Total
	Flat		Assessment		CUC		DBR		IBR		Complex		Res.	Com.	Rates or
Province	Res.	Com.	Res.	Com.	Res.	Com.	Res.	Com.	Res.	Com.	Res.	Com.	Rates	Rates	Assess.
Newfoundland	84	69	1		2	8		5					86	82	169
P.E.I.	13	3				9							13	12	25
Nova Scotia	24	6			1	2	42	44					67	52	119
New Brunswick	48	31			5	7	11	14	1	1			65	53	118
Quebec	330	246	28	28	61	159	6	24	8	9		2	405	440	901
Ontario	157	78	10	1	131	144	64	99	20	15	7	7	379	343	733
Manitoba	9	2	3	1	8	9	26	27					43	38	85
Saskatchewan	12	1			42	38	17	20	10	10	1	1	82	70	152
Alberta	30	14	2		71	65	29	36	10	11		2	140	128	270
British Columbia	118	81	1	1	24	44	15	41	10	9		3	167	178	347
Yukon	3	2			1	1							4	3	7
North Territories	3	1			17	15							20	16	36
Population Size Group (000's)															
below 1 (sample)	3	2			8	7	2	2	1	1			14	12	26
1 to 2	224	154	4	6	75	101	35	50	8	6	1	2	343	313	656
2 to 5	279	205	13	10	82	124	42	71	15	15		1	418	416	857
5 to 50	289	159	20	10	158	226	111	157	30	29	4	6	592	577	1199
50 to 500	33	13	6	4	35	40	17	25	5	4	3	6	93	88	191

500+	3	1	2	1	5	3	3	5					11	9	23
Total	831	534	45	31	363	501	210	310	59	55	8	15	1471	1,415	2962

Table derived from final MUP94 database (for responding municipalities with rate types or assessments), Environmental Economics Branch, Environment Canada.

Table 17 - 1996
Frequency Distribution of Residential and Commercial Water Rate Types, by Province and by Population Size Group

	Flat Charge Types				Volume-Based Rate Types								Total	Total	Total
	Flat		Assessment		CUC		DBR		IBR		Complex		Res.	Com.	Rates or
Province	Res.	Com.	Res.	Com.	Res.	Com.	Res.	Com.	Res.	Com.	Res.	Com.	Rates	Rates	Assess.
Newfoundland	81	73	1		1	8		4					82	85	168
P.E.I.	5	3			1	3							6	6	12
Nova Scotia	24	6				2	38	40					62	48	110
New Brunswick	49	36			8	14	9	9					66	59	125
Quebec	303	247	25	23	54	151	7	23	8	10		1	372	432	852
Ontario	146	85	9	1	133	147	59	86	24	16	8	9	370	343	723
Manitoba	10	2	3	1	11	10	25	27	1	1			47	40	91
Saskatchewan	10	2			40	35	15	18	7	9	2	2	74	66	140
Alberta	27	11	2		79	69	23	32	13	12		1	142	125	269
British Columbia	118	88			31	47	10	34	13	12		2	172	183	355
Yukon	4	3			2	2							6	5	11
North Territories	2	1			17	15							19	16	35
Population Size Group (000's)															
below 1 (sample)	4	2			5	5	1	1					10	8	18
1 to 2	192	156	3	3	76	97	34	47	6	5	2	3	310	308	624
2 to 5	258	197	11	7	78	113	41	67	14	16	1	2	392	395	805
5 to 50	282	185	16	9	174	243	81	117	36	33	4	5	577	583	1185
50 to 500	40	16	8	5	38	41	28	37	9	6	3	5	118	105	236
500+	3	1	2	1	6	4	1	4	1				11	9	23
Total	779	557	40	25	377	503	186	273	66	60	10	15	1418	1,408	2891

Table derived from final MUP96 database (for responding municipalities with rate types or assessments), Environmental Economics Branch, Environment Canada.

Table 17 - 1999
Frequency Distribution of Residential and Commercial Water Rate Types, by Province and by Population Size Group

	Flat Charge Types				Volume-Based Rate Types								Total	Total	Total
	Flat		Assessment		CUC		DBR		IBR		Complex		Res.	Com.	Rates or
Province	Res.	Com.	Res.	Com.	Res.	Com.	Res.	Com.	Res.	Com.	Res.	Com.	Rates	Rates	Assess.
Newfoundland	81	74	1			9		4					81	87	169
P.E.I.	5	3			1	3							6	6	12
Nova Scotia	21	6			4	5	31	35					56	46	102
New Brunswick	48	36			9	13	7	9			1		65	58	123
Quebec	312	263	20	18	59	153	6	22	9	15		1	386	454	878
Ontario	131	76	7	1	143	149	48	74	19	14	9	9	350	322	680
Manitoba	7	3	3	3	11	11	26	27	1	1			45	42	93
Saskatchewan	8	3			41	35	17	18	6	9		1	72	66	138
Alberta	26	10	1		80	71	20	30	12	14	1	2	139	127	267
British Columbia	118	85			37	55	7	28	9	12	2	2	173	182	355
Yukon	4	3			2	2							6	5	11
North Territories	2	1			18	16							20	17	37
Population Size Group (000's)															
below 1 (sample)	12	9			3	5	1	1					16	15	31
1 to 2	152	129	2	2	76	89	33	46	4	6	1	3	266	273	543

2 to 5	245	205	8	6	76	101	32	52	11	16	1		365	374	753
5 to 50	311	204	14	10	197	275	69	106	34	38	6	5	617	628	1269
50 to 500	39	15	6	3	44	45	26	38	6	5	5	7	120	110	239
500+	4	1	2	1	9	7	1	4	1				15	12	30
Total	763	563	32	22	405	522	162	247	56	65	13	15	1399	1,412	2865

Table derived from final MUP99 database (for responding municipalities with rate types or assessments), Environmental Economics Branch, Environment Canada.

Table 18 - 1991
Residential Participation - Number of Municipalities* and Populations Responding to Survey, by Province and Population Size Group**

	population size group (000's)											
	below 2		2 to 5		5 to 50		50 to 500		500+		Total	
Province	Mun.	Pop.	Mun.	Pop.	Mun.	Pop.	Mun.	Pop.	Mun.	Pop.	Mun.	Pop.
Newfoundland	38	52,618	25	81,795	12	139,615	1	100,000			76	374,028
P.E.I.	5	7,931	3	8,058	3	29,426					11	45,415
Nova Scotia	9	12,095	12	41,571	20	316,781	2	188,000			43	558,447
New Brunswick	22	31,921	9	29,288	14	157,063	2	131,979			47	350,251
Quebec	61	87,341	131	420,025	151	2,169,263	14	1,201,318			357	3,877,947
Ontario	42	57,600	71	222,300	139.1	2,030,634	34.4	4,573,328	3	1,703,099	289.5	8,586,961
Manitoba	15	22,319	8	22,941	10	115,141			1	610,000	34	770,401
Saskatchewan	33	43,059	19	53,690	11	148,308	2	358,800			65	603,857
Alberta	38	52,486	26	85,483	47	475,133	3	177,555	1.23	777,156	115.2	1,567,813
British Columbia	15	21,744	35	113,538	56	805,595	17	1,864,202			123	2,805,079
Yukon	1	1,800			1	20,000					2	21,800
North Territories			4	12,500	1	15,000					5	27,500
Total	279	390,914	343	1,091,189	465.1	6,421,959	75.4	8,595,182	5.23	3,090,255	1167.73	19,589,499

Table derived from final MUP91 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada
* Number of municipalities may be less than whole numbers as some municipalities may have assessments as well (pop. allocated by % metered if so).
** Responding refers to those municipalities that gave pricing schedules and domestic metering where appropriate, and for which populations are known or given.

Table 18 - 1994
Residential Participation - Number of Municipalities* and Populations Responding to Survey, by Province and Population Size Group**

	population size group (000's)											
	below 2		2 to 5		5 to 50		50 to 500		500+		Total	
Province	Mun.	Pop.	Mun.	Pop.	Mun.	Pop.	Mun.	Pop.	Mun.	Pop.	Mun.	Pop.
Newfoundland	45	60,721	24	74,250	14	143,977	1	106,000			84	384,948
P.E.I.	4	5,765	6	14,181	3	30,474					13	50,420
Nova Scotia	10	13,029	13	46,461	23	349,311	2	182,000			48	590,801
New Brunswick	26	37,480	11	39,669	14	154,744	2	141,000			53	372,893
Quebec	74	107,156	145	467,139	148	2,268,415	14	1,212,105			381	4,054,815
Ontario	49	67,468	77	244,315	144.2	2,140,272	33.4	4,283,429	4	2,187,231	307.7	8,922,715
Manitoba	14	18,966	10	28,469	13	133,792			1	620,000	38	801,227
Saskatchewan	40	50,733	20	59,436	12	166,123	2	371,000			74	647,292
Alberta	39	55,890	31	107,834	44	478,135	3	184,867	1.35	877,949	118.4	1,704,675
British Columbia	17	23,497	39	130,412	64	899,902	16	1,538,971	1	500,000	137	3,092,782
Yukon	2	2,900			1	23,500					3	26,400
North Territories	12	14,064	4	12,686	1	15,179					17	41,929

Total	332	457,669	380	1,224,852	481.2	6,803,824	73.4	8,019,372	7.35	4,185,180	1274.03	20,690,897

Table derived from final MUP94 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada
* Number of municipalities may be less than whole numbers as some municipalities may have assessments as well (pop. allocated by % metered if so).
** Responding refers to those municipalities that gav e pricing schedules and domestic metering where appropriate, and for which populations are known or given.

Table 18 - 1996

Residential Participation - Number of Municipalities* and Populations Responding to Survey, by Province and Population Size Group**

	population size group (000's)											
	below 2		2 to 5		5 to 50		50 to 500		500+		Total	
Province	Mun.	Pop.	Mun.	Pop.	Mun.	Pop.	Mun.	Pop.	Mun.	Pop.	Mun.	Pop.
Newfoundland	39	51,799	25	78,731	15	155,772	1	108,000			80.0	394,302
P.E.I.	2	2,665	2	8,582	2	46,525					6.0	57,772
Nova Scotia	8	10,852	12	42,308	11	106,516	2	470,925			33.0	630,601
New Brunswick	25	35,934	15	55,346	13	163,850	2	134,313			55.0	389,443
Quebec	55	81,344	128	422,463	157	2,462,322	14	1,274,291			354.0	4,240,420
Ontario	53	75,441	70	226,838	138.6	2,097,043	36.3	4,634,326	4	2,338,382	301.9	9,372,029
Manitoba	17	23,625	9	27,012	14	143,066			1	630,000	41.0	823,703
Saskatchewan	32	41,832	21	61,848	12	166,758	2	390,000			67.0	660,438
Alberta	37	52,122	33	109,316	46	516,667	3	190,000	1.5	972,178	120.5	1,840,283
British Columbia	18	25,045	34	113,252	68	992,098	16	1,730,534	1	520,000	137.0	3,380,929
Yukon	3	5,400			1	23,500					4.0	28,900
North Territories	12	14,817	4	13,169	1	18,000					17.0	45,986
Total	301	420,876	353	1,158,865	478.6	6,892,117	76.3	8,932,389	7.5	4,460,560	1216.4	21,864,806

Table derived from final MUP96 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada
* Number of municipalities may be less than whole numbers as some municipalities may have assessments as well (pop. allocated by % metered if so).
** Responding refers to those municipalities that gave pricing schedules and domestic metering where appropriate, and for which populations are known or given.

Table 18 - 1999

Residential Participation - Number of Municipalities* and Populations Responding to Survey, by Province and Population Size Group**

	population size group (000's)											
	below 2		2 to 5		5 to 50		50 to 500		500+		Total	
Province	Mun.	Pop.	Mun.	Pop.	Mun.	Pop.	Mun.	Pop.	Mun.	Pop.	Mun.	Pop.
Newfoundland	40	51,437	22	65,728	17	167,643	1	106,000			80	390,808
P.E.I.	2	2,676	1	4,291	2	39,531					5	46,498
Nova Scotia	8	10,728	11	38,738	13	131,085	2	447,403			34	627,954
New Brunswick	24	33,623	13	51,289	16	213,644	2	131,000			55	429,556
Quebec	49	73,422	138	453,845	162	2,459,533	16	1,399,242			365	4,386,042
Ontario	25	34,237	49	175,487	148.6	2,430,262	33.3	4,265,076	2	2,958,099	257.9	9,863,160
Manitoba	17	22,826	9	27,552	14	144,552			1	620,000	41	814,930
Saskatchewan	32	42,897	19	55,149	13	178,900	2	397,000			66	673,946
Alberta	38	54,097	31	96,812	50	604,708	3	194,040	1.57	1,103,020	123.57	2,052,677
British Columbia	20	27,999	33	112,955	69	1,030,846	17	1,848,127	1	554,000	140	3,573,927
Yukon	2	2,761	1	2,100	1	23,000					4	27,861

North Territories	12	15,712	4	13,900	1	17,250					17	46,862
Total	269	372,415	331	1,097,646	506.6	7,440,954	76.3	8,787,888	5.57	5,235,119	1188.47	22,934,222

Table derived from final MUP99 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada

* Number of municipalities may be less than whole numbers as some municipalities may have assessments as well (pop. allocated by % metered if so).

** Responding refers to those municipalities that gave pricing schedules and domestic metering where appropriate, and for which populations are known or given.

Table 19 - 1991

Municipalities with Assessed Residential Water Pricing, by Province and by Population Size Group

Prov.	No. of Munic.*	Municipal Population	Population Served Water	% of Total	Population Serv. Sewers	% of Total	Pop. Serv. Sew. Treat.	% of Total	Total ADF	Domestic ADF**	% of Total**	Avg./Cap. litres/day**
NF	1.00	2,500	2,500	100.0	2,500	100.0	0	0.0	1,364	1,091	80.0	436.5
PE												
NS												
NB												
QU	29.00	1,856,995	1,852,408	99.8	1,850,173	99.6	1,039,991	56.0	1,998,913	691,046	34.6	373.1
ON	5.48	273,358	248,098	90.8	249,688	91.3	249,688	91.3	172,809	68,159	39.4	274.7
MA	1.00	2,075	2,075	100.0	2,057	99.1	2,057	99.1	2,096	1,991	95.0	959.6
SK												
AB	0.77	549,055	549,055	100.0	544,935	99.2	544,935	99.2	345,856	145,260	42.0	264.6
BC	1.00	3,804	500	13.1		0.0			300		0.0	0.0
YK												
NTH												
Population Size Group (000's)												
below 2	2.00	2,686	2,134	79.4	2,134	79.4	1,700	63.3	2,798	2,046	73.1	958.8
2 to 5	14.00	45,898	41,599	90.6	37,019	80.7	18,389	40.1	28,792	19,443	67.5	467.4
5 to 50	13.90	303,069	277,918	91.7	279,508	92.2	135,717	44.8	246,189	84,512	34.3	304.1
50 to 500	6.58	761,079	757,930	99.6	759,757	99.8	550,930	72.4	577,703	326,286	56.5	430.5
500+	1.77	1,575,055	1,575,055	100.0	1,570,935	99.7	1,129,935	71.7	1,665,856	475,260	28.5	301.7
Total	38.25	2,687,787	2,654,636	98.8	2,649,352	98.6	1,836,670	68.3	2,521,338	907,547	36.0	341.9

Table derived from final MUP91 database (for responding municipalities with Assessments), Environmental Economics Branch, Environment Canada

* Number of municipalities may be less than whole numbers as some municipalities may have rates as well (pop. allocated by % metered if so).

** Incomplete reporting of water flow usage (generally not metered) for these municipalities may make these domestic ADF estimates and percentages unreliable.

Table 19 - 1994

Municipalities with Assessed Residential Water Pricing, by Province and by Population Size Group

Prov.	No. of Munic.*	Municipal Population	Population Served Water	% of Total	Population Serv. Sewers	% of Total	Pop. Serv. Sew. Treat.	% of Total	Total ADF	Domestic ADF**	% of Total**	Avg./Cap. litres/day**
NF	1.00	12,000	12,000	100.0	12,000	100.0	12,000	100.0	9,000	3,600	40.0	300.0
PE												
NS												
NB												
QU	28.00	1,790,698	1,776,229	99.2	1,781,924	99.5	1,764,012	98.5	1,939,331	693,314	35.8	390.3
ON	7.32	284,939	257,712	90.4	247,353	86.8	247,488	86.9	174,999	89,054	50.9	345.6
MA	3.00	20,464	17,106	83.6	17,956	87.7	17,956	87.7	13,029	7,266	55.8	424.8
SK												
AB	1.65	485,050	471,050	97.1	466,170	96.1	466,170	96.1	249,500	105,990	42.5	225.0
BC	1.00	3,804	400	10.5					250	225	90.0	562.5
YK												
NTH												

Population Size Group (000's)												
below 2	4.00	6,270	5,545	88.4	6,220	99.2	6,220	99.2	9,030	6,860	76.0	1237.2
2 to 5	13.00	42,779	34,906	81.6	32,647	76.3	21,235	49.6	25,875	15,698	60.7	449.7
5 to 50	17.75	360,354	316,852	87.9	301,318	83.6	294,953	81.9	263,356	92,126	35.0	290.8
50 to 500	5.57	703,836	693,478	98.5	702,168	99.8	702,168	99.8	520,848	351,025	67.4	506.2
500+	1.65	1,483,716	1,483,716	100.0	1,483,050	100.0	1,483,050	100.0	1,567,000	433,740	27.7	292.3
Total	41.97	2,596,955	2,534,497	97.6	2,525,403	97.2	2,507,626	96.6	2,386,109	899,449	37.7	354.9

Table derived from final MUP94 database (for responding municipalities with Assessments), Environmental Economics Branch, Environment Canada.
* Number of municipalities may be less than whole numbers as some municipalities may have rates as well (pop. allocated by % metered if so).
** Incomplete reporting of water flow usage (generally not metered) for these municipalities may make these domestic ADF estimates and percentages unreliable.

Table 19 - 1996

Municipalities with Assessed Residential Water Pricing, by Province and by Population Size Group

Prov.	No. of Munic.*	Municipal Population	Population Served Water	% of Total	Population Serv. Sewers	% of Total	Pop. Serv. Sew. Treat.	% of Total	Total ADF	Domestic ADF**	% of Total**	Avg./Cap. litres/day**
NF	1.00	12,000	12,000	100.0	12,000	100.0	12,000	100.0	9,092	5,001	55.0	416.8
PE												
NS												
NB												
QU	25.00	1,782,124	1,775,378	99.6	1,770,352	99.3	1,756,318	98.6	1,858,045	664,654	35.8	374.4
ON	5.10	177,077	161,827	91.4	150,007	84.7	150,007	84.7	118,652	60,286	50.8	372.5
MA	3.00	20,464	16,981	83.0	17,853	87.2	17,853	87.2	19,940	10,505	52.7	618.6
SK												
AB	1.54	424,387	410,499	96.7	404,899	95.4	404,899	95.4	215,260	121,271	56.3	295.4
BC												
YK												
NTH												
Population Size Group (000's)												
below 2	3.00	4,544	3,819	84.0	4,494	98.9	4,494	98.9	5,958	3,160	53.0	827.4
2 to 5	11.00	36,305	31,242	86.1	27,316	75.2	17,282	47.6	18,744	12,769	68.1	408.7
5 to 50	13.40	222,601	196,229	88.2	182,674	82.1	182,674	82.1	177,970	106,943	60.1	545.0
50 to 500	6.70	717,426	710,218	99.0	705,450	98.3	701,450	97.8	497,654	253,487	50.9	356.9
500+	1.54	1,435,177	1,435,177	100.0	1,435,177	100.0	1,435,177	100.0	1,520,663	485,359	31.9	338.2
Total	35.64	2,416,053	2,376,686	98.4	2,355,111	97.5	2,341,077	96.9	2,220,989	861,717	38.8	362.6

Table derived from final MUP96 database (for responding municipalities with Assessments), Environmental Economics Branch, Environment Canada.
* Number of municipalities may be less than whole numbers as some municipalities may have rates as well (pop. allocated by % metered if so).
** Incomplete reporting of water flow usage (generally not metered) for these municipalities may make these domestic ADF estimates and percentages unreliable.

Table 19 - 1999

Municipalities with Assessed Residential Water Pricing, by Province and by Population Size Group

Prov.	No. of Munic.*	Municipal Population	Population Served Water	% of Total	Population Serv. Sewers	% of Total	Pop. Serv. Sew. Treat.	% of Total	Total ADF	Domestic ADF**	% of Total**	Avg./Cap. litres/day**
NF	1.00	10,000	10,000	100.0	10,000	100.0	10,000	100.0	9,092	5,910	65.0	591.0
PE												
NS												
NB												
QU	18.00	1,496,089	1,492,647	99.8	1,489,819	99.6	1,488,585	99.5	1,717,206	632,626	36.8	423.8
ON	3.10	165,795	147,636	89.0	141,838	85.6	141,838	85.6	125,184	61,804	49.4	418.6
MA	3.00	19,592	16,064	82.0	16,919	86.4	16,919	86.4	19,758	10,507	53.2	654.1
SK												
AB	0.43	352,314	352,314	100.0	352,314	100.0	352,314	100.0	202,939	119,557	58.9	339.3
BC												

YK NTH												
Population Size Group (000's)												
below 2	2.00	3,272	3,272	100.0	3,272	100.0	3,272	100.0	3,229	2,054	63.6	627.8
2 to 5	7.00	22,701	16,222	71.5	15,477	68.2	13,243	58.3	10,634	7,093	66.7	437.2
5 to 50	11.40	232,025	216,637	93.4	214,249	92.3	215,249	92.8	199,256	124,305	62.4	573.8
50 to 500	3.70	402,800	399,538	99.2	394,900	98.0	394,900	98.0	331,521	192,681	58.1	482.3
500+	1.43	1,382,992	1,382,992	100.0	1,382,992	100.0	1,382,992	100.0	1,529,539	504,271	33.0	364.6
Total	25.53	2,043,789	2,018,661	98.8	2,010,889	98.4	2,009,655	98.3	2,074,178	830,404	40.0	411.4

Table derived from final MUP99 database (for responding municipalities with Assessments), Environmental Economics Branch, Environment Canada.

* Number of municipalities may be less than whole numbers as some municipalities may have rates as well (pop. allocated by % metered if so).

** Incomplete reporting of water flow usage (generally not metered) for these municipalities may make these domestic ADF estimates and percentages unreliable.

Table 20 - 1991

Residential Servicing, By Water System Component, by Province and by Population Size Group

		Water Supplied		Sewage Collection		Sewage Treatment	
Province	Total Population of Responding Munic.	Pop. Served	as % of total Munic. Pop.	Pop. Served	as % of pop. Serv. Water	Pop. Serv. Primary+	as % of pop. serv. sewer
Newfoundland	374,028	349,820	94	323,682	93	49,698	15
P.E.I.	45,415	36,849	81	45,025	122	45,025	100
Nova Scotia	558,447	436,713	78	403,775	92	114,068	28
New Brunswick	350,251	324,759	93	316,326	97	289,076	91
Quebec	3,877,947	3,615,657	93	3,311,172	92	1,857,373	56
Ontario	8,586,961	7,918,314	92	7,728,297	98	7,726,089	100
Manitoba	770,401	755,051	98	755,513	100	756,662	100
Saskatchewan	603,857	603,011	100	602,319	100	602,420	100
Alberta	1,567,813	1,479,669	94	1,461,347	99	1,460,267	100
British Columbia	2,805,079	2,553,573	91	2,425,008	95	2,355,661	97
Yukon	21,800	17,300	79	17,185	99	15,385	90
North Territories	27,500	27,300	99	27,500	101	27,500	100
Population Size Group (000's)							
below 2	390,914	365,778	94	337,326	92	271,240	80
2 to 5	1,091,189	939,058	86	853,387	91	685,411	80
5 to 50	6,421,959	5,397,075	84	5,090,188	94	3,943,514	77
50 to 500	8,595,182	8,325,850	97	8,047,210	97	7,310,021	91
500+	3,090,255	3,090,255	100	3,089,038	100	3,089,038	100
Total	19,589,499	18,118,016	92	17,417,149	96	15,299,224	88

Table derived from final MUP91 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.

Table 20 - 1994

Residential Servicing, By Water System Component, by Province and by Population Size Group

		Water Supplied		Sewage Collection		Sewage Treatment	
Province	Total Population of Responding Munic.	Pop. Served	as % of total Munic. Pop.	Pop. Served	as % of pop. Serv. Water	Pop. Serv. Primary+	as % of pop. serv. sewer
Newfoundland	384,948	358,552	93	333,931	93	46,271	14
P.E.I.	50,420	38,807	77	49,468	127	49,468	100
Nova Scotia	590,801	465,858	79	457,441	98	133,697	29
New Brunswick	372,893	340,612	91	344,813	101	307,599	89
Quebec	4,054,815	3,760,542	93	3,496,171	93	2,676,297	77
Ontario	8,922,715	8,275,590	93	8,069,849	98	8,069,508	100
Manitoba	801,227	776,741	97	779,686	100	779,886	100
Saskatchewan	647,292	638,449	99	637,320	100	635,635	100

Alberta	1,704,675	1,635,063	96	1,618,170	99	1,617,078	100
British Columbia	3,092,782	2,784,757	90	2,655,866	95	2,590,075	98
Yukon	26,400	19,700	75	19,700	100	16,885	86
North Territories	41,929	41,884	100	41,834	100	41,834	100
Population Size Group (000's)							
below 2	457,669	425,988	93	393,729	92	329,438	84
2 to 5	1,224,852	1,046,942	85	976,362	93	821,948	84
5 to 50	6,803,824	5,751,224	85	5,502,392	96	4,686,121	85
50 to 500	8,019,372	7,727,221	96	7,484,174	97	6,979,134	93
500+	4,185,180	4,185,180	100	4,147,592	99	4,147,592	100
Total	20,690,897	19,136,555	92	18,504,249	97	16,964,233	92

Table derived from final MUP94 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.

Table 20 - 1996

Residential Servicing, By Water System Component, by Province and by Population Size Group

		Water Supplied		Sewage Collection		Sewage Treatment	
Province	Total Population of Responding Munic.	Pop. Served	as % of total Munic. Pop.	Pop. Served	as % of pop. Serv. Water	Pop Serv. Primary+	as % of pop. serv. sewer
Newfoundland	394302	362,174	92	337,425	93	45,994	14
P.E.I.	57772	51,033	88	54,165	106	54,165	100
Nova Scotia	630601	489,408	78	449,066	92	179,801	40
New Brunswick	389773	345,221	89	362,574	105	328,031	90
Quebec	4240420	3,996,258	94	3,674,583	92	3,052,678	83
Ontario	9372029	8,779,509	94	8,532,730	97	8,535,925	100
Manitoba	823703	790,660	96	788,129	100	788,329	100
Saskatchewan	660438	652,951	99	653,211	100	653,311	100
Alberta	1840283	1,760,334	96	1,749,760	99	1,749,832	100
British Columbia	3380929	3,105,646	92	2,878,779	93	2,831,999	98
Yukon	28900	24,200	84	24,200	100	22,750	94
North Territories	45986	45,941	100	45,891	100	45,891	100
Population Size Group (000's)							
below 2	420,876	396,884	94	371,054	93	328,608	89
2 to 5	1,158,865	1,032,475	89	986,124	96	863,570	88
5 to 50	6,892,117	5,914,640	86	5,599,443	95	5,058,878	90
50 to 500	8,932,389	8,598,776	96	8,177,714	95	7,621,472	93
500+	4,460,560	4,460,560	100	4,416,178	99	4,416,178	100
Total	21,864,806	20,403,335	93	19,550,513	96	18,288,705	94

Table derived from final MUP96 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.

Table 20 - 1999

Residential Servicing, By Water System Component, by Province and by Population Size Group

		Water Supplied		Sewage Collection		Sewage Treatment	
Province	Total Population of Responding Munic.	Pop. Served	as % of total Munic. Pop.	Pop. Served	as % of pop. Serv. Water	Pop. Serv. Primary+	as % of pop. serv. sewer
Newfoundland	390,808	357,661	92	335,169	94	57,582	17
P.E.I.	46,498	35,476	76	42,576	120	41,876	98
Nova Scotia	627,954	487,936	78	447,139	92	194,527	44
New Brunswick	429,556	357,774	83	392,502	110	328,340	84
Quebec	4,386,042	4,142,029	94	4,034,679	97	3,903,890	97
Ontario	9,863,160	9,031,953	92	8,760,241	97	8,766,989	100

Manitoba	814,930	780,602	96	789,052	101	790,352	100
Saskatchewan	673,946	666,685	99	666,576	100	666,576	100
Alberta	2,052,677	1,946,274	95	1,925,488	99	1,924,977	100
British Columbia	3,573,927	3,217,806	90	2,998,675	93	2,954,794	99
Yukon	27,861	24,861	89	22,361	90	21,861	98
North Territories	46,862	46,267	99	43,945	95	46,217	105
Population Size Group (000's)							
below 2	372,415	352,201	95	328,351	93	291,290	89
2 to 5	1,097,846	951,918	87	911,471	96	837,926	92
5 to 50	7,440,954	6,148,190	83	5,898,964	96	5,647,904	96
50 to 500	8,787,887	8,411,106	96	8,132,597	97	7,733,841	95
500+	5,235,119	5,231,909	100	5,187,019	99	5,187,019	100
Total	22,934,222	21,095,324	92	20,458,403	97	19,697,981	96

Table derived from final MUP99 database (for responding municipalities with rate charges), Environmental Economics Branch, Environment Canada.

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